

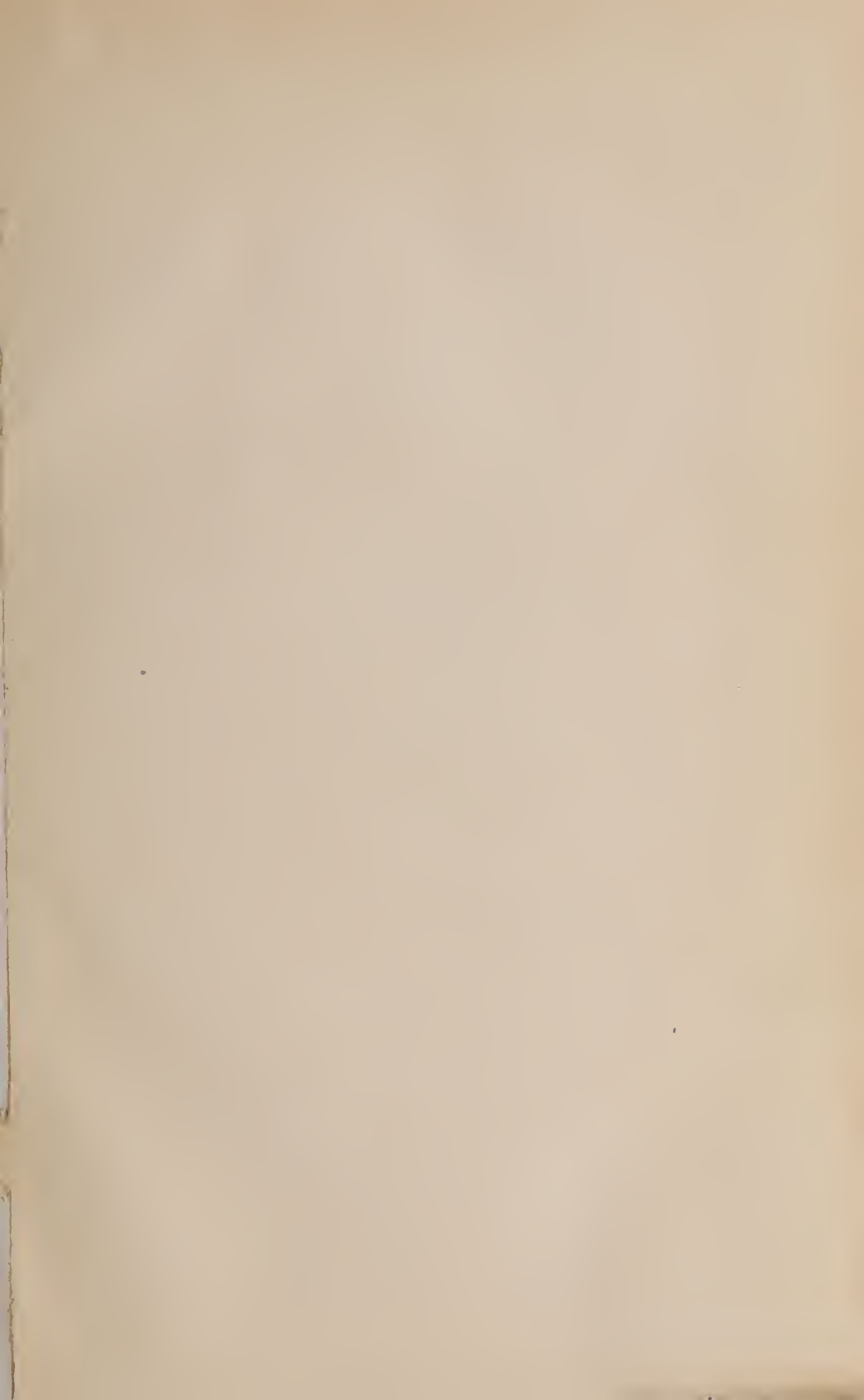
Reference

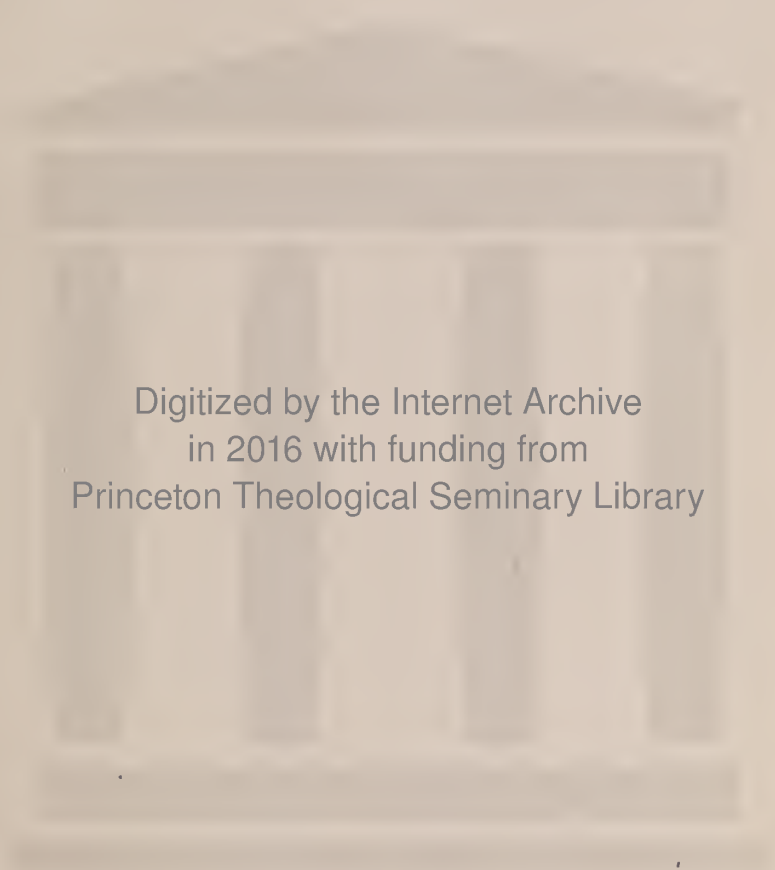
Division...A-1.97

Section...A-14

No...1880

July-Dec





Digitized by the Internet Archive
in 2016 with funding from
Princeton Theological Seminary Library



✓ Princeton Theological Review

THE

✓
P R I N C E T O N
R E V I E W.

By ~~Whom~~, all things; for ~~Whom~~, all things.

FIFTY-SIXTH YEAR.

JULY—DECEMBER.

NEW YORK

1880.

JULY.

	PAGE
THE POSITION OF ENGLAND IN THE EAST	1
CANON GEORGE RAWLINSON, UNIVERSITY OF OXFORD	
THE THEORY AND PRACTICE OF ELECTIONS	24
PROF. WILLIAM G. SUMNER, YALE COLLEGE	
GENESIS OF SIN	42
GEORGE DANA BOARDMAN, D.D., PHILADELPHIA	
THE EDENIC PERIOD OF MAN	62
ALEXANDER MACWHORTER	
PRINCIPLES OF TAXATION	92
FRANCIS A. WALKER, PH.D., WASHINGTON	
THE PHILOSOPHY OF EDUCATION	115
PROF. S. S. LAURIE, UNIVERSITY OF EDINBURGH	
DEVELOPMENT AND GROWTH OF CONSCIENCE	138
PRESIDENT MCCOSH, PRINCETON COLLEGE	

SEPTEMBER.

PHIYSICAL HABITS AS RELATED TO THE WILL	145
PROF. HENRY CALDERWOOD, LL.D., UNIVERSITY OF EDINBURGH	
LATE AMERICAN STATESMEN	166
FRANCIS WHARTON, LL.D., CAMBRIDGE	
POPULAR EDUCATION AS A SAFEGUARD FOR POPULAR SUFFRAGE	186
PREST. ROBT. L. DABNEY, D.D., LL.D., HAMPDEN-SIDNEY THEOL. SEM.	

	PAGE
POETIC STYLE	207
PRINCIPAL SHAIRP, D.C.L., UNIVERSITY OF ST. ANDREWS	
ORGANIZATION OF LABOR	231
SIMON NEWCOMB, LL.D., WASHINGTON	
SYMBOLIC LOGIC	247
PROF. JOHN VENN, UNIVERSITY OF CAMBRIDGE	
HERBERT SPENCER'S THEORY OF SOCIOLOGY: A CRITICAL ESSAY	268
PRESIDENT PORTER, D.D., LL.D., YALE COLLEGE	

NOVEMBER.

THE ULTIMATE DESIGN OF MAN	297
PROF. FREDERIC GODET, D.D., SWITZERLAND	
HOW CONGRESS AND THE PUBLIC DEAL WITH A GREAT REVENUE AND INDUSTRIAL PROBLEM	319
HON. DAVID A. WELLS, LL.D., D.C.L.	
THE SABBATH QUESTION	335
PRESIDENT SEELYE, AMHERST COLLEGE	
AGNOSTICISM IN KANT	353
PROF. ORMOND, MINNESOTA STATE UNIVERSITY	
THE ANTIQUITY OF MAN AND THE ORIGIN OF SPECIES	383
PRINCIPAL DAWSON, LL.D., MONTREAL	
THE HISTORICAL PROOFS OF CHRISTIANITY	399
GEORGE P. FISHER, D.D., LL.D., YALE COLLEGE	
CRITERIA OF THE VARIOUS KINDS OF TRUTH	419
PRESIDENT MCCOSH, PRINCETON COLLEGE	

THE ULTIMATE DESIGN OF MAN.

TO what end was man created—man endowed with faculties so marvellous, and yet ever discontented, ever racked by aspirations that remain ungratified?

The solution given by each one of us to this problem is, in our existence, a momentous event. It determines the direction which we assign to our activity, and decides thereby the result of our life, a result which is great, inevitably great, whether it be of glory or of shame.

At the close of one of his celebrated addresses, the most popular orator humanity has ever known exclaimed: "Whosoever heareth these sayings of mine, and doeth them, I will liken him unto a wise man, which built his house upon a rock: and the rain descended, and the floods came, and the winds blew, and beat upon that house; and it fell not: for it was founded upon a rock. But every one that heareth these sayings of mine, and doeth them not, shall be likened unto a foolish man, which built his house upon the sand; and the rain descended, and the floods came, and the winds blew and beat upon that house; and it fell"—and here, reproducing, so to speak, in the majesty of his words, the crash of the falling structure, he added, "and great was the fall of it."

The life of a man reaching its close is indeed a grand spectacle, whatever that close may be; appallingly grand when that life has been a failure; sacredly, gloriously grand when the dying man, raising toward heaven a serene countenance, can say: "Father, I have accomplished the work Thou gavest me to do."

May the thoughts here submitted contribute to make our lives *successful* lives, lives answering to the Divine ideal of the ultimate design of man!

I.

First of all, there arises a preliminary question : Has man an ultimate design ?

If each product of man's activity has a definite and decided purpose, how can man, the living principle of all this intelligent activity, himself be a being destitute of a purpose ?

Yet there are minds that ask this question and answer it in the negative. They claim that in the presence of the phenomena of nature and even the phenomenon of the appearance of man, we may very well seek for *causes*, but not for the *purpose*. Occurrences and things, they say, obey laws and forces, but tend to no *design*. Two facts drawn, the one from the physical world, the other from our moral nature, seem to me to shed a sufficient light upon this question.

It is a universally admitted fact that man appeared last among the beings that people the earth, and that since his appearance science discovers that of no new species of existences, whether vegetable or animal. So, then, on the one hand, man made his appearance as the pinnacle and the utmost bound of nature ; on the other hand, the creative work ceased with the appearance of this being. May we not logically conclude from this, that man was really the *purpose* of terrestrial creation ? And if he be the purpose of creation, can it be that he has himself an aimless existence ? Or, if this proof be not absolutely conclusive, is it not at least an inductive argument of great significance ?

To this physical fact there corresponds a moral phenomenon of startling solemnity. It was pointed out, at the end of the last century, by one of the most profound thinkers that have honored the human race—Kant, the philosopher of Königsberg. In completing a work which has made an ineffaceable mark in the field of human thought, he wrote, under the sway of the most noble emotion, the following lines : “ Two things fill my soul with an admiration and a veneration, ever new and ever increasing : the starry heavens above me, and the moral law within me. I am not compelled to look for these two grand sights through the covering of a mysterious obscurity. nor to ascertain them vaguely at an infinite distance. I con-

template them immediately before me ; they are bound to the very consciousness of my being. The one, the visible heaven, begins at the very point of the universe where I am, and widens around me in circles of worlds, in systems of systems, up to the infinitude of spaces and of times in which these worlds are situated. The other, the moral law, equally starts from my invisible self ; it places me in the midst of the intellectual universe, that other infinitude with which my personality stands in a necessary relation. And while the first (the sight of the heavens) annihilates my personal importance, the second (the fact of the moral law) raises to the infinite the worth of my personality ; since that law manifests in me the existence of a life completely independent of my animal life and of the world of sense."

Man is among all beings here below, the only one intrusted with a moral law. He became, in virtue of this, the privileged depositary of a life superior to all the laws and all the forces of the physical existence. Natural beings, deprived of moral light, can only be *means* in relation to each other. By that interior legislation which man possesses, he acquires an absolute value ; he appears as a being that has its ultimate design in the very activity it unfolds. Moral action, precisely because it has no other end but itself, impresses upon the being that is its author the seal of an accomplished destination.

II.

Man has therefore a destination. Physical nature and our own moral nature proclaim it in concert. But—and here arises a second preliminary question—should this ultimate design be regarded as *collective*, as applying only to the species, or, also, as *individual* ? In other words, does the goal to be reached stand immediately before each one of us, in such a way that we can realize it individually and possess it as our own property ; or, is the end of human existence to be realized only in a distant future wherein the last comers of the race alone will be able to share ? Or, even, may it not consist in an indefinite progress in which each generation participates only in passing, and according to the measure of its period ? Let us again interrogate, respecting this question, the two masters

whom we have just been consulting, external nature and our own moral nature.

The former unfolds beneath our eyes, in the lower grades of the organized world, an unheard-of prodigality of individuals. Only a very small portion of these innumerable products accomplishes the cycle of existence ; the greater part is expended in the service and for the supply of the food of other species. But in proportion as we rise in the scale of animal life, this lavishness diminishes and makes room for frugality ; the products become less numerous and consequently acquire more worth. Finally, when we have reached the pinnacle, man, parsimony succeeds frugality ; even the case of twins is, on this superior level, a rare exception. It is as if, in her hieroglyphic language, Nature said to the father and mother : " The being I confide to you is so exceptionally precious that your entire solicitude and all your united strength are not more than sufficient to labor for its preservation and training in view of its sublime destination."

In a word, in the sphere of animal existence, it is the species that governs ; the individual has worth only as a passing representative and depositary of the species. But when we arrive at humanity, the relation is reversed. Here the essential is the individual ; the species is only his cradle, his starting-point, his support, his auxiliary.

This significant language of Nature is confirmed by that of our own moral instinct. Whence, for instance, comes the aversion with which the institution of *slavery* inspires us, if not from the innate sentiment that man is not made to be degraded to the rank of a means ? Whence comes again the horror produced within us by the act of *cannibalism* ? It is often explained by the crime of the murder which is inseparable from it. But is it supposable that a soldier on the battle-field would willingly bring himself, if the necessity of food should become pressing, to feed upon the body of his comrade who has fallen under the shot of an enemy's ball ? No, the reason is more profound. This shrinking proceeds from the fact that the human body possesses in our eyes too exalted a dignity to be debased, like animal flesh, to the character of an aliment.

Our moral nature agrees, therefore, with external nature in

rendering homage to the value of that human personality the incomparable dignity of which God has proclaimed, by placing upon its head the crown of freedom of the will and of moral responsibility. A free personality carries within itself its own proper ideal, and not merely that of the species ; so that if humanity entire possesses a collective destination, this destination can only be the result of the accomplishment of every particular destination, the sum of the radiance formed by the pencil of rays emanating from individual perfections.

As for the idea, so wide-spread at the present day, of *indefinite progress*, how can we help discerning the contradiction which is inherent in it? "The notion of progress," has said M. de Hartmann, the most sceptical and the most popular philosopher of Germany, "contains necessarily that of an object." For if after having taken a thousand steps, I am no nearer the goal than before beginning to walk, because it ever remains infinitely removed from me, such progress is in reality no progress at all. The notion of progress disappears with that of an end to be attained.

III.

We are, therefore, led to give greater precision to our original question.

What is the ultimate destination of the *individual* man?

And since, inasmuch as man thinks, he has offered many answers to this problem, let us, first of all, establish the characteristics by means of which we shall be able to recognize the true solution.

These characteristics, indicated by the nature of things, are three in number :

1. The true solution must be applicable to all men. There can here be no possible aristocracy. Every one born of mankind must be able to realize the destination of man. Otherwise the unity of the human species would be destroyed.

2. The true solution must comprise, in each man, *the entire man*, with all his faculties. Otherwise, the faculty that is excluded would protest against the proposed destination, and the unity of the human person would be broken.

3. The true solution must be applicable *to all the moments of human existence*. Otherwise life would be composed of moments which concur in tending to our destination, and others which necessarily take us farther from it. The unity of human existence would be denied.

To comprise all men, the entire man, and that in all the moments of his life, here are the conditions to which the true solution of the problem of human destination must conform.

Starting from this point, let us put to the test the principal solutions of this great problem that have been offered.

I. Some—and those who practise this solution are more numerous than those who profess it—esteem the end of human life to be *pleasure*; not material gratification merely, but enjoyment in general, comprehending all the progress of civilization, the delights of intellectual enjoyments and of the fine arts, the sweet affections of the family. And as the condition of enjoyment in these different relations is assuredly wealth, this principle practically transforms itself, whether the truth be confessed or not, into the following: to make one's fortune, and to make it as quickly as possible, in order to be able to have the longest gratification.

Certainly, we cannot ignore the important part played by pleasure in the economy of human life. It powerfully stimulates the exercise of our faculties; it often serves to point out to us the normal character of our physical and moral states, just as suffering is an index of its diseased or abnormal character. But from the fact that pleasure may be useful to us as a spur or as a touchstone, it does not follow that it is the end of our existence. And, indeed,

1. It is not within the reach of *all*. How many lives are there which are fatally deprived of it, and which are even given up to its opposite! That little child, born with a vitiated blood and a misshapen body, for which every vital action is suffering, every motion torture; that poor orphan, upon whom life weighs like a daily load, who cannot meet an infant in the arms of its mother without feeling her heart breaking **under the blow** of poignant grief; that man who walks here **below under** the burden of a loss that has made him forever solitary, and has paralyzed within him even the faculty of enjoyment; that

other man who drags about with him the memory of a dishonourable deed which public opinion will never forgive him—Go, comfort these unfortunates, by preaching to them the doctrine of pleasure ! Say to them that the object of life is enjoyment—to them who are forever banished from this Eden ! It is hard under any circumstances to suffer. But to suffer while saying to one's self that this suffering leads to nothing, that far from bringing us nearer our destination, it takes us farther away from it—there is in this enough to cause the bitter cup to overflow ! It is despair with its most baleful consequences.

2. Does this destination embrace the *entire man* ? No ! There is even with us a faculty whose seat is precisely in the most noble regions of our soul, which frequently demands the voluntary renunciation of enjoyment and the free acceptance of suffering. It is the sentiment of moral obligation, of duty. A physician, the father of a family, who every hour exposes his life in the midst of the ravages of a contagious disease, does not act thus in view of enjoyment. And who, nevertheless, shall be able to say, should he perish at his task, that he has not accomplished his destination even better than in long enjoying the delights of life in the midst of his friends, at the price of a cowardly abandonment of his patients ? And will you accuse the man who sacrifices his life to save that of his benefactor of running counter to the grand design of man, because he subordinates the instinct of gratification to the noble impulse of gratitude ? The power of overcoming the allurements of pleasure or the fear of pain in the name of duty, is precisely what most deeply distinguishes man from animals. To seek to subject man to what is agreeable, is to efface this line of demarcation traced by nature herself ; it is to make us descend the ladder which we were called to climb.

3. Finally, pleasure is not the element that can be made to penetrate *all the moments* of life. I appeal here to a single man, to the most serious of all, to the oldest. If gratification were the object of human life, this design ought to burst forth in all its brilliancy at the moment when we approach the bounds, where the goal must be nearest to us. But what a strange end, I pray you to notice, for a being whose destination is pleasure, is that supreme anguish, that agonizing shud-

der, that presentiment of approaching dissolution, that nameless exhaustion which precedes what we call the last gasp ! This is the fatal rock upon which the theory of pleasure definitely splits.

To sum up this theory severs the unity of the species by assigning to human life an end which an entire portion of the race is fatally precluded from attaining. It severs the unity of the human person by proposing to man a destination which leaves outside of itself a certain number of its faculties, and those just the most noble. It severs the unity of each human life by dividing up life into series of moments, one series of which carry us toward the goal, while the other series take us farther from it.

This theory is, therefore, condemned by all our three postulates.

II. We shall be more brief in the discussion of another end which has often been assigned for human existence—namely, *Knowledge*.

This was the explanation of life offered by the best minds of antiquity, such as Plato and Aristotle.

That man is made to know, who doubts ? The eye is not more evidently constructed to see than the intellect to learn. But from the fact that knowledge is one of the elements that enter into man's destination, does it follow that knowledge is itself this destination ?

No ! For, in the first place, science is not for *all*, first because scientific men necessarily form a minority that can live only on the condition that, to enable them to live, thousands of others should consecrate themselves to the inferior occupations of life. The learned repay them, doubtless, for this service ; but such, at any rate, is the state of the case. Moreover, scientific aptitude is a prerogative that is conferred by nature only upon a somewhat restricted number of favorites.

In the second place, science is too narrow a function to embrace *the entire man*. That learned mathematician who, on coming from the representation of a dramatic masterpiece, exclaimed, "What does it prove?" was not certainly in our eyes a complete man. That professor of physics whom I heard one day on the top of Mont Pilatus, while gazing upon a glo-

rious sunrise, learnedly discuss the angle of refraction which the rays of the sun must make with the snowy surface, in order to paint it with that rosy hue, inexpressibly fresh and delicate, could he be regarded as a complete man? That father always shut up in his study, who is nothing for his family, and whose children disconsolately exclaim, "Our father is not a man, he is a *savant*!" could he be regarded as the type of a well-rounded man? Would one choose him for a confidant, for an intimate friend? The truth is that the intellect is not the whole man. The truth is that it is bitter cold on the lofty peaks of pure thought and of knowledge; that the heart grows hard and the vital blood may congeal up there under the icy blast of selfishness and pride. The truth is that beside intellect there exist within us will and feeling, of which the cultivation cannot be neglected without warping our development and mutilating our personality.

This end, knowledge or science, might, strictly speaking, answer to our third postulate. Study is adapted to fill *all the moments* of him who consecrates himself to it. Eating and drinking, rest and sleep, recreation and walking, can indirectly be put to the service of this work, until that hour, at least, when the intellectual faculties become impotent through disease or decline. But this fact, which I am glad to note, only proves one thing; and that is, that in passing from enjoyment to science we have begun to climb the ladder. We have really come a step nearer the solution sought for. But we have not yet reached it, as is attested by the demands of our first two postulates.

III. A third solution of the problem which occupies our attention has been proposed. The destination of man, we are told, is the fulfilment of moral obligation, of *duty*. "Duty," says a celebrated modern writer,¹ "with its incalculable philosophical consequences, in imposing itself upon all, resolves all doubts, reconciles all oppositions, and serves as a foundation to rebuild what reason destroys or allows to crumble away. Thanks to this revelation, free from ambiguity and obscurity, we affirm that he who has chosen the right is the truly wise man." In

¹ M. Renan, in his preface of the *Book of Job*.

other words, the normal man, the complete man is the man of duty.

We are quite ready to affirm with M. Renan the sovereignty of duty. But we ask ourselves merely what, in this point of view, is contained in the moral obligation thus placed upon the throne? We shall probably be told in reply: Why, it is justice toward our neighbor, kindness for all beings, self-control in the form of moderation in pleasure, and resignation in suffering.

Here is certainly a scheme of life which, when seriously undertaken, is not to be despised. It answers at least, in a certain measure, two of our three postulates, the first and the third. The principle of moral obligation does, indeed, apply to all human beings. "The divine revelation of duty," as M. Renan says, "illuminates every human conscience." The idiot himself is not destitute of all moral sense. I have seen the poor *crétin* of our high valleys, at twenty years of age, clinging to his mother's dress and practising, as well as he could, the duty of loving her, obeying her, and relieving her in her domestic toils.

The principle of duty is equally capable of presiding at every instant of our existence, and thus of securing the continuity of moral life. What act is there of ours, be it even the simplest recreation, which cannot, by the spirit we bring to it, come directly or indirectly into the category of duty accomplished?

Two of our postulates are, therefore, really satisfied, and we have certainly taken a step forward. Knowledge was nearer the goal than pleasure, duty is nearer to it than knowledge. May we then have reached the end? Let us consult again our last postulate. Does this solution, duty, satisfy *the entire man*?

The human soul is endowed with three principal faculties: the faculty of thought, that of will, and that of feeling. By the first, the intellect, we perceive the whole cycle of existence; by the second, the will, we set upon the world about us our own impress. The third is the deepest and most mysterious of the three. It is to them what the trunk of a tree is to the two mighty branches which it sustains and nourishes. Feeling is the seat of impressions, whether pleasurable or painful, of sympathies and antipathies, of high aspirations, and of unfathomable presentiments. It is by this faculty that we feel as it were the

rebound of all that takes place in the entire universe, and hold intercourse with the infinite, a rich mine whence proceed the noblest metals current in human life, great thoughts and heroic resolutions.

Are these three faculties satisfied by the theory of duty?

Let us begin with the *will*. It is the faculty to which the very notion of duty appeals most directly and to which it most distinctly pays homage. The will, confronted with duty, complains that it has, in order to sustain it against the allurements of pleasure, against the suggestions of self-love or interest, only the cold and abstract principle of obligation. Beside, the contents of this obligation itself is something so vague, so wanting in precision, that this principle, under this ill-defined form, resembles a net with coarse meshes; the elastic tissue of which will, so soon as we strongly desire it, suffer the grossest immorality to pass through.

Such are the objections which the will makes. The *intellect* has also objections of its own. It is anxious to account for every thing. It wants to know upon what foundation rests the exorable authority of moral obligation. Here is an imperious master that can at any instant claim the most painful sacrifices. The intellect would demand to know the title it can have to so absolute a right of sovereignty. Now, it seems to the intellect that duty when questioned gives no answer. Moreover, the intellect looks for the sanction of the obligation. It wishes to know who will become responsible for repairing the violations of duty, and for indemnifying a man, if, after having been faithful to it, he come to be the victim of the unfaithfulness of another. And here again the system remains dumb. Let us speak frankly.

Either God does not exist, and, in this case, who imposes upon me moral obligation? Who determines its contents? Who watches over its fulfilment? Who guarantees its inviolability?

Or, God does exist, and then how can it be that this supreme moral personality, this Being who, if He exists, must be the living good, plays no part in the sphere of moral obligation, how can He but be Himself its supreme object?

And what does *feeling*, too, say with regard to this principle

of duty for duty? Its boundless aspirations, its bold flights, scarcely accommodate themselves to this honorable but cold principle. In the depth of every human heart there is an instinct which nothing can stifle, and which manifests itself now by an insatiable ambition, now again by an overwhelming sadness—the thirst for the infinite. This thirst cannot be slaked in the abstract principle of moral obligation. Uprightness, kindness, moderation, we may have kept all these duties from our youth—I take as a witness the rich young man of the gospel—and yet be like the thirsty hart panting after the water-brooks.

Pleasure, knowledge, duty, all these good things must certainly enter into the fulfilment of the destination of man. Neither Epicurus, nor Plato, nor the Stoics went completely astray. But no one of them gave the true solution. We have not yet contemplated the haven in which man can rest with the conviction of a destination fulfilled.

IV.

To what guide must we apply that we may commit to it the prosecution of our search, and attain, if possible, the solution of which we are in quest?

Once again : to nature, to physical and moral nature, which has been the counsellor of our first steps in this investigation. The more nature is studied, the more we discover in it a school of divine wisdom.

I. What do we see in the domains of nature inferior to ourselves? Each being tending to associate itself and unite with some being of an order superior to it, in favor of which it becomes a means. Thus the plant does not confine itself to accomplishing the cycle of its yearly vegetation, it enters as an integral factor in the operation of the life of beings superior to itself—animals. In every animal, in man himself, there is a certain number of functions to which physiology has given the name of *vegetable life*, and which are only the organic incorporation of the plant in the animal.

Such is also, on a higher scale, the relation between the animal and man. And I refer here not merely to that palpable fact, that physical, or so-called *animal* life is and remains the

basis of all human existence ; as vegetable life is that of all animal life. I apply myself to an order of more exalted considerations, and here is what strikes me in this respect in the organization of nature. The animal does not aspire to become a man, any more than the plant aspires to transform itself into an animal. None the less, however, does it tend toward man. Its ambition is to join us. We discern this tendency of the animal world toward man in the rising series of animal creations that have succeeded one another on our earth before the appearance of man. These successive organisms, indeed, have more and more approached the human type, and have ceased to advance toward it only when this type, itself appeared. It was man whom they were seeking.

We will notice, also, the attraction exercised by man over the animal world among the higher animals which admit, in a manner much more distinct than the inferior animals, the ascendancy of human personality, even to laying aside their most deep-rooted instincts of ferocity under the fascinating glance of their tamer.

But it is especially on the pinnacle of the animal world, among the domestic animals, that we are met by the demonstrative proof of the aspiration which impels the beings of nature to join themselves to man. Here you see the animal world in some sort *humanizing* itself, grouping around our persons, like a crowd of faithful subjects who love to associate themselves with our labors, who with docility place at our disposal strength often superior to ours, and who often seem to be happy only when in society with us.

In this general organization of nature there is revealed a fundamental law ; it is that *every being tends upward* ; and in this aspiration must be found at once the index and the measure of that being's ultimate design.

Man also has his aspiration. As the animal tends, not to become a man, but to associate itself with man, so man aspires, not to become the infinite Being, but to unite with Him by partaking of His perfect absolute existence. In proportion as this infinite Being discloses Himself to him—in nature, as wisdom and omnipotence ; in the conscience, as justice and holiness ; in the intimate impressions of our heart as supreme goodness—there

is awakened in us the feeling of our moral relationship with Him, and the need of communicating with this invisible and unknown Father. There is an irresistible drawing toward that glorious and limitless life, that infinitely rich life of which we daily contemplate the proofs in the excellence, in the beauty, in the greatness, and in the infinite variety of its works. This is the attraction under the influence of which the Israelitish singer uttered that sublime cry : " My soul thirsteth for God, for the living God."

To be associated with this mysterious Being, to participate in His thoughts, to serve as an agent for His power and His love, to be a fellow-laborer in His work, this is the ideal which, more or less distinctly formulated, reveals itself to our soul and becomes the object of our supreme aspiration. This instinct is not a blind, unthinking attraction, like the attachment of the animal to its master. It is a luminous intuition, a prophetic presentiment which, once formed within us, appeals to our liberty, draws after it all our faculties, and determines the direction of our life. It is the revelation of the mystery of our destination.

Our ultimate design, thus understood, comprises two things which I shall express by means of a formula borrowed from a form of speech familiar to you : *We in God, and God in us.*

We in God : by the abdication of our own will, by the renunciation of our fallible thought, by the despoiling of our vain and egotistic self, in order to affirm in lieu of ourselves, God, His will, His thought, His supreme person, even when we still have only a dim perception of it. This is the first act ; it is the emptiness to be wrought within us, in order that we may receive and possess something better than ourselves.

Next the answer, *God in us* : as a result of His infinite condescension toward His creature. *God in us*, by the revelation of His thought to our intellect, by the communication of His creative power to our will, by the indwelling of His person itself in our heart. Such is the second work, which stands related to the first as fulness to emptiness.

O man ! go out of thyself to transport thyself and place thyself in God ; and may that God, leaving His infinite depths, abase Himself to thee to operate in thee, that in this meeting,

the infinite Spirit may find in thee, a finite spirit, the free agent and the joyful instrument of His perfect life, and thy destination, O man! whoever thou mayest be, is fulfilled. Thou couldst not conceive of one less exalted without degrading thyself; nor one more exalted without the loss of reason.

II. Let us submit this solution to the test to which we have subjected the preceding solutions. Does it answer the three conditions indicated?

It certainly applies to *all men*. What finite spirit could be deprived of the right of intercourse with the infinite Spirit from which it is an emanation? What worldly position could rise, like an impenetrable barrier, between *the Father of the spirits of all flesh* and the human soul which is His breath? In suffering, nothing could prevent us from approaching Him by the humble sacrifice of submission. In prosperity, what more natural than that we should turn to Him with the impulse of gratitude? Thus every thing in life may become the occasion of a living contact between our soul and this infinite Spirit.

It is certain, again, that the human destination thus understood embraces *the whole man*: our will, which henceforth tends only to offer itself as an agent for the divine will; our intellect, which aspires only to discern the thought of God realized in His works, in order to revolve it in thought and celebrate it; our heart, in fine, which, as one of the church fathers has remarked, "finds rest"—the full delight of existence—"only when it rests in God." All our faculties are thus exalted to their highest power by their exercise in God.

Finally, is there *a moment of human life* which must remain a stranger to such a destination? May not the most insignificant act of life be accomplished in view of God? "Whether ye eat, or drink, or whatsoever ye do," said a man whose actions always matched his words, "do all to the glory of God." The end of life thus understood is placed sufficiently high to command the whole of it, and yet is put near enough to us to be at every moment within our reach, and in some sort to fall within our hand in every act of our existence. This solution even stands the test of the supreme moment, that of our final exhaustion. Nay, rather it is at that moment that it triumphs.

III. It is so true that this solution of the problem of life is

the true one, that it contains in itself all the portion of truth possessed by the three solutions previously tried.

Where could *pleasure* better have its place in human existence than where a filial heart relishes each blessing as the gift of the love of an invisible Father, and culls each pleasure on the path of life as a flower sown by that tender hand?

Where could *knowledge* flourish more magnificently and produce more savory fruit than when this noble activity, instead of being tainted by the vile stimulants of selfishness, pride, or cupidity, sets before it as the supreme end to discover the thought of the Creator in each of His works, to make it resplendent in the eyes of all, and thus becomes a hymn to the glory of His wisdom?

And when will *the fulfilment of duty* be more solidly guaranteed than when it shall rest on the feeling of obligation toward God himself? Be not anxious respecting the uprightness and kindness of a man toward his fellows from the moment that he is resolved to love God above every thing, and has given his heart to Him in earnest. What constitutes the cohesion of the points in a circumference, is not their accidental juxtaposition in relation to one another; it is the invisible radius uniting each of them to the centre of the circle. Never will a man succeed in *loving his neighbor as himself* until he has laid down before God the despotic autonomy and egotistic independence of self, and consented first to *love God with all his heart, with all his soul, and with all his mind*.

Duty holily performed, knowledge humbly cultivated, pleasure purely tasted, these are the different forms of a worship in spirit and in truth which rises ceaselessly toward heaven from the sanctuary of a soul thoughtful and living in God.

IV. And it is not only each human soul, but also the entire *species* that finds in this solution the explanation of the mystery of its final design.

A single finite mind could not display all the wealth of the infinite Being. As the life of nature could not unfold itself in one single and solitary plant, and requires those one hundred thousand species of trees and flowers that compose the vegetable kingdom, to offer to our senses all the abundance and diversity of forms, of colors, of scents, of savors, of virtues,

which nature conceals in her bosom ; so does it require an entire company of free and intelligent minds to manifest the fullness of perfections and strength which the creative Spirit contains in Himself. And if the final design of each individual is formulated in the expression, He in God, God in him, the destination of the whole species, being necessarily the result of the individual destinations, will be expressed in words which long ago were uttered by the mouth of a holy man : "*God all in all.*"

Do we see in thought, advancing upon the theatre of a purified earth, the majestic band of the fellow-workers with God?—here the manufacturers, authors of a world of wonders which shall eclipse these numberless masterpieces which we here behold ; there the merchants, who, in the midst of universal peace, will enrich the entire globe with the precious products of every part ; there creative minds in the domain of art, each exerting himself to his utmost to invest all this labor with the splendor of beauty. Here, on the other hand, are the scientific laborers, the explorers of nature, with their microscopes, their retorts, their compasses, their gigantic telescopes ; the delvers into history, extracting from the dust of libraries the intelligible picture of the past ; the searchers for truth, the philosophers striving to reach the sublime thought which both hides and reveals itself in the measureless phenomenon of the universe. This is not all. Yonder are the organizers of social life, the guides of that public administration which maintains order in all these spheres, the depositaries of justice, and, last of all, the interpreters of religious feeling. All this army of free workers is moving under the influence of a single inspiration, the spirit of a holy love, toward a single end, placed high enough to be the aim for all, and low enough to be incarnated immediately in the work of each. . . . Here is the collective destination. It is the kingdom of God in man, or, if you prefer it, of man in God. And, as the result, the earth transformed into heaven—that is to say, heaven realized on the earth ; until, in an economy still higher, this kingdom of God, consummated here below, shall burst forth, shall spread gradually from place to place, from sphere to sphere, to the farthest extremities of the intelligent universe by the ministry of man, become,

as an individual and as a species, the executor of God's plan, the messenger of universal love.

V. And, what is remarkable, from the point which we have reached, casting a glance backward, we can account for the *forms of existence* which preceded ours here below, and the thought that presided at their appearance.

What does the existence of *the plant* signify? We behold in it the pleasing spectacle of a being which unfolds without resistance and yields without distrust to the mysterious power of nature. While the latter, like a tender mother, liberally communicates to this frail and delicate existence a sap that will unfold in it a wealth of savors, of perfumes, of forms, and of colors, the plant receives all silently and without effort, and pretends to be nothing more nor less than what that rich communication of the infinite, from which it lives, will grant it to be.

Have we not recognized the emblem, and, if one may say so, the parable of the relation between man and the infinite Being who has conferred life upon him? Man yielding himself up to God with complete surrender, God communicating Himself to man in the riches of His infinite munificence.

What then is the meaning of the existence which we call the flower? It is the image of our fulfilled destination. The world of plants is a picture-book, the book with one hundred thousand drawings, by each one of which the Creator gives us this kind lesson: "Do in reference to Me, with freedom and self-surrender, O man, what this plant unconsciously does in reference to nature! Open thyself to the action of My spirit, and I will unfold in thee perfections of wisdom, of beauty, of strength, and of love, superior even to those which thou admirest in these existences."

That prince of modern poets had heard this sublime language addressed by the floral world to man's heart, who, in a couplet which our tongue can but imperfectly render, said:

"The flower has a divine secret to reveal to thee; it tells how a moist dust can be clad with the glory of heaven."

This perhaps explains the spell which the world of plants exercises over the soul wearied by the battle of life, the quieting and soothing influence that is so naturally evolved. The flower represents to us our ultimate design fulfilled, our ideal

realized. Realized? Yes, but only in painting. For there is wanting to the plant what is wanting to Nature herself, of which it is the daughter, freedom. The plant is what the creature ought to be, but without having *willed* so to be.

What a contrast between the vegetable and the animal world! Here we encounter, if not freedom, at least spontaneous motion, which is its prelude. In passing from the plant to the animal, we enter into the toil of life, with its emotions, its appetites, its violence, its dangers, its conflicts, its sorrows. We are in the sphere of earnest and terrible reality. The bloody contest for existence has begun, and paves the way for the appearance of the being in whom the ideal is at length to be realized, not merely under the form of a graceful emblem, but under that of a true life. We are visibly approaching the being in whom the free surrender of the finite mind will meet the generous love of the infinite Being.

We can readily see it: the plant is graceful poetry; the animal world is severe history. Man is the keystone of the arch in which these two domains of nature inferior to him converge; he is the crowning point of history and the realization of poetry, the living and free link between the whole of nature below him and the God who created it for him.

V.

In perusing the solution of the problem of our ultimate design, thus set forth, the reader might have had constantly in his heart an objection: "It is all very good! I in God, God in me. I can indeed conceive of nothing more desirable, nothing more grand. Only, how can I reach such a state? God is in heaven, lost in the inaccessible infinitude of His essence; I am on the earth, imprisoned in the inclosure of the finite, of matter; separated from God by a wall even more massive than the contrast of nature, by my evil instincts and by the many faults into which they have led me."

In reflecting upon the solution to which we have been conducted on the road of moral experience and of natural induction, the thought may arise: "This solution is the Christian solution!" And nevertheless we have not once introduced

into our study *revelation*, Christianity. The fact is that Christianity, without pretending to be a philosophy, none the less here below brings, as it were, under the folds of its cloak, a philosophy, and the truest philosophy. But let us hasten to add that it is itself quite another thing from, and better than, the best philosophy. Christianity is a fact, the capital fact of our history. It is the ultimate design of man, not only taught but realized. It is the appearance of a living being, of a real person, who says to humanity: "I am the truth, more even than the truth, *I am the truth and the life.*"

Christianity is, indeed, too wise to be only wise. It fathoms too lovingly and with too much pity the deficiencies of our life, the depths of our impotence, the abyss of our moral forfeiture, to confine itself to saying: "O man, here is thy destination! Raise thyself up to God; unite thyself to Him; fill thyself with His perfect life and become His blessed instrument." The Gospel knows too well that to such an invitation we would answer with bitterness, "Give me the ladder that I may be able to scale those heavens." It takes good care also not to reveal to us our destination under the form of a moral law, of a categorical command, or of a poetical ideal. It sets forth the law, the ideal, in distinct history, realized in a being of flesh and bones, like ourselves, whose whole existence is the living illustration of this formula: Man in God, God in man.

In this being, who may be called the divine life lived humanly, the abyss between the infinite God and finite man is filled up. In contemplating it we exclaim: "*Behold the man!* Behold my ideal realized!"

"Yes," one will exclaim, "realized but in one person, in one person only! And what do all others gain?" The Gospel has anticipated this objection and answered it beforehand. It says to us: "In one *for all!*" Precisely because this ideal is not a simple idea, but a person, a life, it possesses the faculty inherent in all life of reproducing itself. "As the living Father hath sent me, and I live by the Father; so he that eateth me, even he shall live by me."¹ So speaks the God-man; he lives from the Father, his life is a constant assimilation and reproduction of God. It remains for us only to *eat* him; that is the

¹ John vi. 57.

emblem of the most personal and intimate assimilation of which we can conceive ; and as God reproduces His life in him, he reproduces in us his own life, which is that of God.

When the invisible forces of nature are to be communicated to us for the support of our body fainting from inanition, they do not remain in their invisible state ; they are condensed, they become tangible and capable of being seized in a material aliment, in that fruit, in that piece of bread which you can grasp in your hand and carry to your mouth. So when the infinite Being was pleased to convey to man His perfect life, He did not remain in His inaccessible spiritual nature ; He became incarnate in a human being like unto us, in the person, acts, and words of whom He, as it were, condensed His divine life. And this Being calls us to Himself, saying : " I am the bread of life which came down from heaven to give life unto the world."

But just as when we are desirous of sustaining our exhausted strength, we do not content ourselves with meditating philosophically or with dreaming poetically about the life-giving power of nature, but we must come and place our hand upon the piece of bread and assimilate it to ourselves ; so in order to appropriate the life of the great Unknown, whose invisible presence envelops us, and to unite ourselves to Him, of what use would it be for us to give ourselves up to the loftiest philosophical speculations, or even to rise to heaven upon the wings of religious aspiration ? A simple, distinct, decisive act is needed, an act in which all the powers of our being co-operate—heart, intellect, will ; we must have *faith* by which we seize the bread of life which came down from heaven, and bringing it near to our heart, eat it. At once it reproduces itself in us spiritually by its own virtue, and transforms us into its image and its proper substance.

With a conscience broken with the feeling of sin, 'to drink at the fountain of pardon opened in His sacrifice, for sin and uncleanness, this is *to drink His blood*. With a heart hungering for holiness, to feed on the contemplation of His person, His acts, and His words, and to entreat that Lord, who is *the life-giving Spirit*, to live again in us, this is *to eat His flesh*. The work of incarnation which He accomplished in His own person

is continued in us from this moment. Open to Him, welcome Him, and in Him God who lives in Him, and in response to this act of absolute sympathy for Him, God on His side, sympathizing with you, will incline to us, will communicate Himself to us, and will make of us His dwelling-place. And having thus become the depositaries of His perfect life, the agents of His omnipotence, the instruments of His infinite love, the bearers of universal peace, we will have solved the problem of the ultimate design of man ; better than in theory and in words, we will ourselves be its living and blessed solution.

FREDERIC GODET.

HOW CONGRESS AND THE PUBLIC DEAL WITH A GREAT REVENUE AND INDUSTRIAL PROBLEM.

THAT it is entirely practicable, through wise economic legislation—*i.e.*, in respect to taxation, banking, currency, the relations of capital to labor, interstate and foreign commerce, and the like—to healthfully, largely, and speedily promote our national development, increase the opportunities for profitable labor, and so the consequent comfort and abundance of the masses, is a proposition about which there is a very general concurrence of public sentiment. Judging, however, from recent experience—the only criterion for safe judgment—any expectation of the speedy attainment of any such result is not likely to be realized. And in evidence of such most unsatisfactory conclusion, and with a faint hope that its presentation may in some degree prove remedial, it is proposed to here tell the story of what has happened in a recent case, pre-eminently demanding wise legislation in the interests of all our people as consumers; of the laborer seeking employment; of the national revenue; of the prosperity of our seaboard cities, and of our foreign commerce and carrying trade. The material for this presentation is to be found in the case of the single article of sugar in its relations to consumption, foreign commerce, domestic industry, and national revenue.

Few, other than those who have made the subject a specialty of study, realize the extent to which sugar has become a factor in the great aggregate of the world's business and a necessity in the world's consumption; and to all, the statement of numerical results can convey little except the indefinite, general idea of *bigness*. Nevertheless it is necessary to make certain statistical

statements as a starting-point in the proposed discussion, and here they are.

For the whole world, the present annual production of sugar of all kinds is probably about 5,500,000 tons, or in round numbers *twelve thousand millions of pounds* (see how it looks in figures: 12,000,000,000 lbs.!!!); of which quantity about three fourths is the product of the cane and one fourth the product of the sugar-beet. The quantity of sugar derived from other sources is comparatively insignificant.

The general answer to the question, What becomes of all this enormous product of sugar? is, that it is eaten up almost as fast as it is produced, but that the ratio of consumption differs greatly in different countries. Thus, Great Britain, which produces no sugar, and the United States, which produces little in comparison with the amount it consumes, together absorb in the first instance about one third of the entire annual sugar product of the world. In respect to per capita consumption of sugar, Great Britain, however, leads, and for the year 1877 retained for home consumption, out of the total sugar by her imported, an amount equivalent to 64.9 lbs. for each man, woman, and child of her population; while in the United States the present annual consumption is probably about 38 lbs. per capita. This marked difference in the use of sugar by the people of the two countries is due mainly to the circumstance that sugar is largely used in Great Britain for certain purposes to which it has not yet to any great extent been made applicable in the United States, as for distilling, brewing, and the feeding of cattle; and being in addition about 33 per cent cheaper in Great Britain (owing to the removal of all tariff restrictions on its importation) than in the United States, the tendency is naturally to a larger consumption by the masses of the people in the former than in the latter country. As respects other countries, Germany consumes about 19 lbs. of sugar annually per capita, or about half the per capita consumption of the United States; while in Russia the annual consumption runs down as low as 7 lbs. per capita.

In answer to the next question which naturally suggests itself, Where does all the sugar come from? it may be said that, commencing with cane-sugar, the Spanish West Indian islands—

Cuba and Porto Rico—stand first in importance among the sugar producing countries, with an annual product of at least 750,000 tons. The other great sources of sugar, named in the order of their importance, are British India, China, the Islands of the East Indian archipelago, Brazil, the British and French West Indies, the Guianas, the United States (80,000 tons), Peru, Egypt, and Central America; but at the same time there is hardly a tropical region which does not produce sugar, and from which the export of this article does not tend to increase with every increase of its commercial intercourse with the rest of the world.

Passing next to sugar produced from the beet-root, it will be found that altho repeated attempts have been made to establish this industry in England and the United States, it is yet mainly restricted to the states of Continental Europe, the centres of production being, first, France; second, Germany; third, Russia; fourth, Belgium; with a notably smaller product in Austria and Holland, and very little in Sweden and Italy.

In addition to all this sweetening, the manufacture from starch of *glucose*, or grape-sugar—the sugar of grapes, or ripe fruits, of honey, and of seeds—is annually increasing in the United States, and has already become a large factor in our domestic trade and consumption. At present some fifteen factories are reported in this country, producing glucose at the rate of about 500 tons per day, or 360,000,000 lbs. per annum; and as the business is understood to have been extremely profitable, many new factories are projected or in the course of construction. In Europe glucose is made mostly from potatoes, but here it is manufactured almost exclusively from corn.

As the culture of the beet and the sorghum in the United States is at present strongly advocated as sources for the future economical production of sugar, it is pertinent to here call attention to what are believed to be the real facts in that case. That sugar can be produced from the sugar-beet, the sorghum, the stalk of the Indian corn, and from many other plant products, is not to be questioned. But the natural source or supply of sugar, especially for the United States, is the sugar-cane, and whoever undertakes to manufacture sugar from any other source practically invites Nature to be his competitor; for in

the proper localities—*i.e.*, the tropics—the sugar-cane grows spontaneously, and can be made to yield sugar at a cost that under natural conditions will absolutely preclude competition from sugar produced under any other circumstances; and such localities, if not at present actually embraced within the territory of the United States, have, by the improvements in transportation, been brought closer to the doors of a majority of our consumers than are the wheat-fields of the North-west. In Europe, in the case of the beet, the natural advantages of the cane are in a degree overcome by a supply of cheap labor—women and children—which does not exist in the United States, and by an economic utilization of all the waste product of its manufacture, which is at present also foreign to the habits of our people; while in the case of the sorghum the saccharine product in the first instance is always of low grade, fluctuating as respects quantity and quality with variations in the seasons, and necessarily requiring, for refinement into a fair marketable article, a degree of skill and expense and a use of machinery which is far beyond the reach of the ordinary agriculturist. Whoever, therefore, recommends the diversion of labor and capital in the United States into the cultivation of the beet-root or the sorghum with a view to the profitable manufacture of sugar therefrom, recommends an investment that is certainly risky and will probably prove disastrous.

In round numbers, the people of the United States at present consume annually about a billion nine hundred million (1,900,000,000) pounds of sugar derived from the cane and the beet (the latter, however, in very small proportion); and of this quantity more than 90 per cent during the year 1879 was the product of foreign countries. The business of transporting sugar—including under this term molasses and all syrups—constitutes, therefore, a great item in the foreign commerce of the United States. In point of fact, it constitutes the largest item in the list of the commodities we import in respect to both value and quantity: in value representing about *one seventh* of the aggregate of all our imports; while of the quantity involved some idea may be formed from the statement that if the vessels employed in the sugar trade have each an average capacity of 500 tons (of 2000 lbs.), the importation of sugar must furnish

a present annual business to the shipping interest to the extent of some *seventeen hundred cargoes*.

Sugar, as an article of very large and constant consumption, has in modern times been regarded by most governments as an especially suitable and convenient source for obtaining revenue by taxation; and in the United States, from the formation of the government, the receipts from the duties on imported sugars have always constituted a large proportion of the national revenues. The average tariff on all imported sugars is at present about 60 per cent; and for the year 1879, out of a total customs revenue of \$133,159,025, \$38,065,803, or 28.58 per cent, was received from sugar, or 30.24 per cent if the imports of molasses be included. As our present average tariff is about 42 per cent on all dutiable imports, it will be seen that the existing customs rates on sugars—amounting specifically to at least three cents per pound, or six dollars per barrel of two hundred pounds, on the lowest grades of sugar really fit for consumption—are exceptionally high. The result is that this essential article of food to the people is higher in price in the United States than in most countries. Whether a reduction of the duty would, however, result in a larger domestic consumption is an open question, as our people, in respect to what they regard as the necessities of life, are not accustomed to calculate and live as closely as the people of Europe; but in Great Britain, when, by the repeal in 1874 of all duties on the import of sugar, the price was considerably reduced, so as to make it about one third cheaper than in the United States, the importations the next succeeding year increased more than a million hundredweight, while the increase in the importation of molasses for the same time exceeded 100 per cent.

To this sketch of the relations of sugar to the foreign commerce and carrying trade of the country, to its agriculture, and its national revenues, it remains to be added that at present no branch of domestic industry in all of these several relations is in a more unsatisfactory and troubled condition; and the problem of how to settle this difficulty is second to none in economic importance—currency excepted—that can at present claim the attention of our people. The source of the trouble is to be found primarily in the methods

adopted by the government—wholly irrespective of any question of free trade or protection—for the collection of duties on the importations of sugar, and which, altho when first established were substantially correct both in theory and practice, have very curiously and recently been in a great measure rendered worthless by the improvements in industrial processes. To understand how this has come about it is necessary to premise that the sugars of commerce differ widely as respects purity, and therefore as respects value. The lowest grades of sugars are almost black from the presence of impurities, and by the ordinary observer would hardly be recognized as sugar; the highest are almost chemically pure, translucent, or brilliant in their whiteness; and between these two extremes there is every intermediate grade of color, purity, and price. The problem of how to readily determine the commercial value of different sugars is obviously, therefore, a most important one. The Dutch, as owners and venders of the large sugar product of the island of Java, undertook many years ago to solve it by founding a standard on the assumption that color in sugars is the certain indication of their purity or value, and practically carrying it out by assigning to the lowest grade of sugars found in commerce a given number as a unit of color—as, for example, the number 4—and making every additional higher number represent a progressive gain in color, and if in color, then inferentially also a corresponding gain in saccharine strength or commercial value. The standards as thus arranged by the Dutch gradually came into extensive use throughout the world for the classification and designation of the sugars of commerce, and as the basis for the assessment of customs; specified samples of sugar, corresponding to the different numbers, and hermetically sealed in glass bottles, being annually prepared and distributed by the Dutch authorities. All sugars, according to the Dutch standard, which grade below No. 7 in color are the typically crude sugars, simply purged from molasses, and really constitute the raw material for every further process of manufacture. And every grade of sugar above No. 7 may be regarded as an advanced manufacture, every step forward in which reduces (brightens) the color and increases the cost, through the added expense of labor and capital.

The number 13 on the Dutch scale is generally accepted as indicating the line between sugars which are the result of the original process of manufacture and sugars which have been refined or subjected to a further and independent process of purification. Sugars designated as No. 20 or upwards are destitute of color or white, and are of the highest degrees of purity.

At the time the Dutch standard was instituted and for many years afterwards it constituted an approximately accurate method of determining the value of sugars; and for sugars above No. 13 it is still regarded as satisfactory, for the reason that above that number the relation between color and saccharine strength or purity, and therefore value, is unquestionably definite. But below No. 13 no such relation can be positively affirmed to exist in respect to any sample of sugar; for the improvements in the processes for making sugar now at the command of every planter who can afford to pay for the somewhat expensive machinery involved, enable him to turn out sugars of as high degree of saccharine strength as 96° (100 representing purity), with a coloration which in the case of the ordinary or old-process sugars, would, according to the Dutch standard, have represented a sugar of not more than 80° to 86° strength, and from 25 to 40 per cent lower valuation. And as the provisions of the United States tariff in respect to the importation of sugar (enacted in 1870) prescribe only the use of the Dutch standard for valuation and assessment—the duties rising and falling rapidly as color changes from dark to light and *vice versa*—and as any excess of color in the new-process sugars does not materially impair their value for refining purposes, the opportunity for great gain afforded to the sugar importer, by complying with the letter but evading the spirit of the tariff, is most obvious. And this opportunity human nature, especially human nature as it exists in the Spanish West India islands and Demerara—the countries where the “new process” has thus far been mainly introduced—has not been slow to embrace. How long sugars continued to be imported under such circumstances without interference on the part of Federal officials, and what profits accrued in consequence to the importers, are not definitely known. It certainly continued several years, and the profits

accruing therefrom were estimated some years ago by a Congressional committee to have aggregated as much as five millions of dollars per annum. The evasion in question also injured and even threatened destruction to former great lines of established trade, inasmuch as the low-grade and low-cost sugars—the special products of the East Indies and Brazil—manufactured by the old process, and in which color is a true coefficient of value, were subjected to the same rates of duty as sugars of much higher intrinsic value imported from Cuba; which amounting to a discrimination of from 20 to 30 per cent against the former, naturally tended to drive them from our markets and still further diminish the already small business of our decaying American shipping.

No serious attempt was, however, really made by the government to put a stop to this business until 1867, when a cargo of Demerara sugars consigned to one of the leading importers in Baltimore was seized on the charge of being artificially colored with intent to defraud the revenue, and on appeal the case was carried to the U. S. Court. The trial was long and expensive, and the claims of the government were at every step resisted; but the jury found that the sugar in question, which had been entered as of the lowest grade, was really of high grade and had been artificially colored with intent to evade the payment of the proper duties; the Court at the same time saying to the officials, as the rule for their guidance in determining the value of sugars for assessment: "You must look through the artificial coloring, and the sugar should be classified according to the color which it would bear if it were not artificially colored." The cargo in question was not forfeited, as the jury found that the Baltimore importers were not in any way parties to the fraud; but the Treasury Department immediately issued stringent orders to its officials to advance the duties on all imported sugars artificially colored, to exact fines and forfeitures where fraud could be found, and to adopt other measures than comparison with the Dutch standards to ascertain the true value of sugars; more especially the use of an optical instrument called the polariscope, which merchants generally had before resorted to in order to protect themselves in dealing in sugars, and which when properly used is acknowledged to show the real saccharine strength

of sugar, with such unfailing accuracy that no cargo of sugar in respect to the commercial value of which there is any dispute, is now ever bought or sold anywhere in the world, except upon the polariscope determination.

As usual the orders of the Treasury were executed in the most arbitrary manner, and in strict accordance with the time-honored principle that in matters of the revenue the merchants have no rights which the government is bound to respect; as a matter of course, also, complaints on the part of merchants and refiners became general. It was alleged, and probably with truth, that appraisers one day and in one port admitted a cargo of sugars as *not* artificially colored, and on another day and in another port similar cargoes were condemned as artificially colored; and also that through favoritism the importations of certain merchants were habitually undervalued. But what different results could have been expected from men appointed for reasons other than special fitness for their trusts, and when the honest and efficient discharge of duty constituted no certain guarantee of tenure of office? It was also claimed that the coloration of sugars declared fraudulent was not artificial, but the result of purely legitimate and normal practices of manufacture; and that the employment of the polariscope by order of the Secretary of the Treasury to determine the value of sugars, when the law specifically prescribed the use of the Dutch standard, and none other, was an "audacious" and illegal assumption of authority. Very many importers of sugars have accordingly paid their duties during recent years under protest, and a large number of suits against the government for the recovery of excess of duties have also been instituted.

The government, on the other hand, in the spring of 1879 despatched two of its most experienced revenue agents to Cuba to make investigations on the plantations where great quantities of sugar are manufactured for the American market; and also caused to be made public a communication to the State Department covering the results of a commission created by the Colonial Government of Demerara during the same year for the purpose of investigating the evidence in regard to the coloring of sugars in that colony brought out in the Baltimore case before mentioned. The facts developed by these inquiries are most remarkable;

altho they do not appear to have as yet been noticed by the American press, or to have excited the least interest on the part of the general public. In Cuba and Demerara alike there was no pretence of concealment that sugars were intentionally manufactured in such a way that the highest qualities might be imported into the United States on payment of the lowest duties; and it was also admitted that this was done under the positive instructions of the importers.

The government experts found, that altho in some instances "caramel" (burnt sugar), aniline dyes, iodine, and other substances had been used in Cuba and Demerara for degrading the color of sugars without essentially impairing their strength, yet the same end could be more easily attained by merely varying the processes of manufacture; *i.e.*, increasing the amount of lime always added to the fresh juice for purification, and applying a high degree of heat to the vacuum-pan in the last stages of the boiling.

Such, then, is a brief sketch of the circumstances under which the sugar problem, some three years ago, came primarily before Congress as the court of appeal and relief from a condition of affairs which all parties are agreed is most unsatisfactory and detrimental in the highest degree to the business of the country. But all parties are not agreed as to the methods of relief; on the contrary, they are in sharp antagonism. A majority in number of the importers of sugar—but not representing a majority of the quantity imported—ask that Congress will simplify the tariff by imposing a uniform rate of duty on all sugars below and including No. 13, which is generally accepted as the line dividing sugars which are the result of the original process of manufacture and sugars which have been refined or purified by other and independent processes. The Treasury officials have recommended the retention of the present classification and the Dutch standard, supplemented by the use of the polariscope. All the Boston importers at one time agreed to recommend a classification and assessment of duties founded on the use of the polariscope exclusively, and the discarding of all other methods. The Louisiana sugar producers also take an interest in the matter, but the sphere of their interest appears to be limited to an apprehension lest, as an outcome of the

trouble, they may fail to retain a higher tax on sugar than is levied on silks, laces, wines, jewellery, and other articles of pure luxury. Finally, as the result of several years' discussion and investigation, the opinion is gaining ground that the interest of all concerned would be best promoted by assessing all imported sugars at some uniform rate of duty according to their value; or as it is technically termed, on the *ad valorem* system.

The proposition urged most strenuously upon Congress for adoption is, that a single specific rate of duty shall be levied on all raw sugars, or sugars not above No. 13, Dutch Standard, with a view of preventing frauds in importations and simplifying the collection of revenue. As the frauds in question however consist in so altering the character of certain sugars, that revenue officers being deceived, shall admit high-grade and high-priced sugars at the same duty as low-grade and low-cost sugars—the intent of the law being that all shall pay in proportion to their value—the proposal that all grades hereafter shall pay but one and the same duty, is equivalent to asking that that which is now illegal and unjust to other associated interest, and which defrauds the Treasury, shall hereafter be made legal.

Viewed also from the stand-point of equity and expediency, the proposition to assess all the varieties of imported raw sugars at one and the same rate of duty is something extraordinary. The United States, for the attainment of its fullest material development as a nation, must have foreign commerce. It desires to attract all nations to its markets; and except when it is itself made the subject of discrimination, it must, for the attainment of this end, admit to equal privileges the people of all nations desiring commercial intercourse. Were the proposition soberly made to discriminate specially and by name, in our commercial laws, against any one, two, or more unoffending nations, the proponent would be speedily hooted into silence. But the proposition to assess raw sugars at one rate embodies this very thing. Thus, to illustrate: the sugars produced in countries of low civilization like Brazil, Central America, the East Indies, and the like, constituting the bulk of the sugar product of the world, are low in grade and price, and necessarily so because these countries lack intelligence and capital. Let

any one take his stand at one of the wharves of New York or other ports, and he will sometimes see sugar unloading, almost black in color and enclosed in palm-leaf bags, of a weight and form suitable to carry on men's backs. Such sugars are evidently the product of countries wanting in roads and beasts of burden, and in facilities for even making lime for use in purification. Such sugars are, however, capable of purification without difficulty, and afford the largest basis in so doing for the profitable employment of domestic labor and capital. The producers, furthermore, must sell them in our markets if they in return are to buy any of the products of our skill and machinery, for they have little or nothing else to buy with. The average cost of such sugars is from $2\frac{1}{2}$ to 3 cents per pound, on which a proposed uniform rate of duty of $2\frac{1}{2}$ cents would be from 80 to 100 per cent *ad valorem*. But the same rate of duty on sugars from Cuba and Demerara, which are further advanced in manufacture and worth, on an average, five cents per pound, would be but 50 per cent *ad valorem*. It needs no argument to prove that so long as Cuba and Demerara were able to supply sugar under such a tariff—and with such bounty in their favor, production would certainly be pushed to the utmost—there would be no trade for sugar with Brazil, the East Indies and Central America; no market in these and like countries for our produce and manufactures, and no employment in this sphere for our shipping; for ships to be profitably employed must have *return* as well as *outward* freights.

Again, it is an axiom of the present (protective) fiscal policy of this country, with a view of encouraging the growth of American manufactures—to admit their raw materials, the produce of foreign countries, especially such as do not compete with our domestic products—as ivory, gums, dye-stuffs, fibres, etc., either free or at low duties. But the proposal to assess all grades of raw sugar at one specific rate is a clear reversal of this policy, inasmuch as it discriminates or prevents the importation of a truly crude material which a great branch of domestic industry demands, and at the same time and in the same degree offers a bounty for the development of a rival branch of the same industry in a foreign country. If, however, it is said

in reply that this government cannot effectually collect the revenue from sugar on any other system of duties, the question at once suggests itself, Does industry in this great republic exist for the government or the government for the industry; and with a present annual surplus revenue of near one hundred millions, is it necessary to cripple any branch of domestic industry in order to collect revenue? But the assertion is not true. The Treasury is satisfied, and its Secretary has informed Congress that, under the present system, with the authorized use of the polariscope, as an adjunct to detect the artificial degradation of color, it can, and at present does, approximately collect the duties on imports of sugar; and with the conservatism of officials, the Treasury proposes nothing further.

But there is something further in this business of the utmost importance to the country which ought to have earnest consideration, but which, unfortunately, thus far has not received it. The business of refining sugars in the United States, measured by the value of its products, ranks as the ninth industry in the country. Great as is its present magnitude, it is capable, through wise legislation, of being greatly extended and of so adding largely to the opportunities for labor, for the employment of American shipping, and to the value of real estate in our seaboard cities. For such has been the skill which Americans have brought to this business, and such their invention and use of machinery, that sugar can now unquestionably be refined in the United States cheaper than in Europe—to the extent, it is claimed, of a quarter of a cent a pound—with a payment at the same time of comparatively high wages to labor. If, therefore, the importations of raw sugars into this country were free—as Great Britain has recently made them—the export of refined sugars to foreign countries would speedily attain to great magnitude, and take rank with the exports of cotton, the cereals, provisions, and petroleum. As, however, no such event is likely, the next best thing to do is to arrange a sugar tariff, such as, after providing for Congressional requirements in respect to revenue and protection, shall aid in the development of this great branch of domestic industry to the extent, at least, of not needlessly restricting. For this end the existing tariff is as ill-

arranged as possible: and the idea that protection could be given in this, as well as other specialities of industry, by a skilful adjustment of duties, full as well, if not better, than by a lumping increase of taxes, seems rarely to find a place in the minds of our law-makers.

Now, how to modify the tariff and at the same time afford all the revenue and protection which the government and Louisiana respectively demand, is the problem under consideration, and in respect to which there is little agreement. But in view of all the facts, the best, the simplest, and the most equitable course would seem to be to adopt the exclusively *ad valorem* system in the assessment of duties on imported sugars; that is, fix on the rate of duty it is desirable to impose—40, 50, 60, or, if need be, 100 per cent—and then apply it impartially to the value of all sugars, from whatever countries imported; the Secretary of the Treasury being at the same time empowered to determine values by the use of all such agencies as he may deem expedient. The only objection that can be made to this course is embodied in the assertion that the government cannot accurately determine the value of sugars. But a sufficient answer to this would seem to be found in the following statements of facts. The sugar business is an enormous and close business, and thousands and millions of pounds constantly change hands at so small a margin of profit that for buyers or sellers to make a mistake in valuation to the extent of an eighth or even a sixteenth of a cent per pound would often be destructive of all profit. But such mistakes are not made, and the system of valuation of sugars, as between merchants, runs with the evenness of clockwork. To assert now that the government cannot successfully adopt the every-day practice of the merchants is simply to assert that honesty and ability in the public service of the United States are unattainable. To such or any other tariff there should also be added, for the sake of encouragement of exports, suitable provisions for manufacturing in bond, or the payment of drawbacks corresponding to the duties collected on the raw materials entering into such exports.

The sugar problem, apart from its features of special interest, has a general claim upon public attention as strikingly illustrat-

ing how great economic questions are dealt with in the United States. Had a matter of like character, affecting the public revenues, foreign commerce, great domestic industries, and the food supplies of the people, come up in Europe, the national government would have at once instituted a thorough investigation; on the Continent through experts not necessarily connected with the government, and in Great Britain through a carefully selected and *special* Parliamentary committee; and as the outcome of this a plan would speedily have been devised, accepted without material amendment, and perhaps without discussion, by government or Parliament, enacted into law, and then carefully watched with a view of amendment as future experience might dictate. A ministry or Parliament moreover that did not keep a sharp look-out for—much more, that treated with indifference—any opportunity to increase trade, extend commerce, and cheapen any great article of production, would soon cease to retain office. In the United States, on the other hand, such matters, if not controlled by private selfish interests, usually drift. In the case in question, the only interest evinced by the executive department of our government has been in respect to revenue: how to collect the largest amount in taxes; the President apparently knowing nothing about the matter; the members of the cabinet, with the exception of the Secretary of the Treasury, caring nothing for it, and the Secretary of the Treasury committing all details and plans in regard to it to his subordinates. In Congress, where the subject has been for several years before one branch, much testimony has been taken by one committee which is always overburdened with other work. Several utterly diverse bills have been reported, always too late in the session to be carefully or at all considered, with a final result of nothing accomplished and a very dubious outlook for the future. To the ordinary Congressman the subject is wearisome, and if he takes any interest in it whatever it is mainly because of the impotency of some few constituents whom he generally obliges by voting, without investigation, in accordance with their individual interests. Nobody looks out for the interest of the public as a whole, and the public is too indifferent to hold anybody to account for neglect. There is, however, this consolation to fall

back upon, and that is, that in the long-run such questions as the one under consideration always get settled in this country somehow, and generally in such a manner as to recall the proverb that "there is a special providence for infants, drunken men, and the United States."

DAVID A. WELLS.

THE SABBATH QUESTION.

IT is a matter for congratulation that on some points of the Sabbath question there is now no dispute. It is agreed that the setting apart of one day in seven as a special day of rest from labor is a wise and beneficent arrangement for men. The fact of this agreement is not only seen in the prevalence of such a day among different nations—as formerly in their very early, if not in their earliest, history among the Egyptians, Assyrians, Hindus, and Hebrews—and in its adoption when brought to the knowledge of nations where it had not been previously known—as when the Romans adopted it from the Egyptians at about the beginning of the Christian era, and the Japanese adopted it from ourselves in our own time,—but in the remarkable uniformity with which the worth of the Sabbath has been affirmed wherever the question has been intelligently investigated. Most elaborate researches upon this point have been conducted by physiologists, political economists, social reformers, philosophers, jurists, and statesmen, often upon different grounds and with different methods, but always with the same result. Without dwelling here upon the exceedingly copious material which these researches furnish, as illustrating the harmonious conclusion reached by all I only quote two extracts, one from a conservative Englishman and the other from a most intensely radical Frenchman. Blackstone in his “Commentaries” (B. IV. c. 63) says :

“ Besides the notorious indecency and scandal of permitting any secular business to be publicly transacted on that day, in a country professing Christianity, and the corruption of morals which usually follows its profanation, the keeping of one day in seven holy, as a time of relaxation and refreshment as well as for public worship, is of admirable service to a state.

considered merely as a civil institution. It harmonizes by the help of conversation and society the manners of the lower classes, which would otherwise degenerate into a sordid ferocity and savage selfishness of spirit; it enables the industrious workman to resume his occupation in the ensuing week with health and cheerfulness, it imprints on the minds of the people that sense of duty to God so necessary to make them good citizens, but which yet would be worn out and defaced by an unremitted continuance of labor without any stated times of recalling them to the worship of their Maker."

Proudhon in his "*De la Celebration du Dimanche*." (p. 67) says:

"What statistician could have first discovered that in ordinary times the period of labor ought to be to the period of rest in the ratio of six to one? Moses then, having to regulate in a nation the labors and the days, the rests and the festivals, the toils of the body and the exercises of the soul, the interests of hygiene and of morals, political economy and personal subsistence, had recourse to a science of numbers, to a transcendental harmony which embraced all space, duration, movements, spirits, bodies, the sacred and the profane. The certainty of the science is demonstrated by the result. Diminish the week by a single day, the labor is insufficient relatively to the repose; augment it in the same quantity, it becomes excessive. Establish every three days and a half a half-day of relaxation, you multiply by the breaking of the day the loss of time, and in shattering the natural unity of the day you break the numerical equilibrium of things. Accord, on the contrary, forty-eight hours of repose after twelve consecutive days of labor, you kill the man by inertia, after having exhausted him by fatigue."

The need of the Sabbath is so clear and its importance so great that it has become a civil institution among the most enlightened states. It is a great mistake to suppose that our so-called Sabbath laws are only coincident with what men term Puritanic bigotry and intolerance. They are well-nigh coextensive and coeval with the Christian world. They began with the first Christian sovereign. The emperor Constantine, soon after his conversion, A.D. 321, decreed that there should be "rest on the venerable Sunday," and his example was followed with more specific enactments and prohibitions by subsequent Roman emperors, eastern and western, by Charlemagne, by kings of the Franks and the Saxons in the early and medieval times of Christian Europe, and still more frequently, and with more

minute requirements, by later European kings. In England and Scotland such statutes have existed from a very early period, modified somewhat in different reigns, and made more lax or more severe according to the changing tone of the times, but on the whole showing an increasing strictness and minuteness in their requirements. The laws of King Athelstan (tenth century) forbade all merchandising on the Lord's day under severe penalties. In Henry VI.'s reign (1448) the holding of fairs and markets on church-festival days and Sundays—except the four Sundays in harvest—was prohibited. In the reign of Elizabeth (1558) it was enacted that "all persons shall diligently and faithfully, having no lawful or reasonable excuse to be absent, endeavor to resort to their parish church or chapel upon every Sunday and other holy days, and then and there to abide orderly and soberly during the time of prayers, preaching, and other services of God." The law passed in the twenty-ninth year of Charles II.—anything, surely, but a Puritan king or a Puritan time—requires that "all persons whatsoever shall, on every Lord's day, apply themselves to the observation of the same, by exercising themselves thereon in the duties of piety and true religion, publicly and privately;" and that "no tradesman, artificer, workman, laborer, or other person whatsoever, shall do or exercise any worldly labor, business, or work of their ordinary callings upon the Lord's day, works of necessity and charity only excepted." The second section prohibits drovers, horse-courers, wagoners, butchers, higglers, and their servants, from travelling, and the use of boats, wherries, lighters, or barges, except on extraordinary occasions. By another section, persons are prohibited from serving or executing any process or warrant on the Lord's day, except in cases of treason, felony, and breach of the peace. Nearly a hundred years after this act was passed and not a hundred years ago, in the twenty-first year of George III.'s reign, it was enacted, "that any house, room, or other place which shall be opened or used for public entertainments or amusement, or for publicly debating on any subject whatsoever, upon any part of the Lord's day called Sunday, and to which persons shall be admitted by the payment of money, or by tickets sold for money, shall be deemed a disorderly house or place; and the keeper of such

house, etc., shall forfeit the sum of £200 for every day that such house, etc., shall be opened and used as aforesaid on the Lord's day." The third section of this act provides "that any person advertising or causing to be advertised or publishing an advertisement of any public entertainment or amusement, or any public meeting for debating on any subject whatsoever on the Lord's day, to which persons are to be admitted by the payment of money or by tickets sold for money, shall forfeit £50 for every such offence." These laws are still upon the English statute-books, tho they have been supplemented, not relaxed, by acts passed in the reign of George IV. regulating inns, taverns, etc., on the Lord's day, by an act passed in the fourteenth year of William IV. whose preamble asserts it to be "the duty of the legislature to remove as much as possible impediments to the due observance of the Lord's day," and by an act in the thirteenth year of Victoria (1850) which repeals the exception in the statute of Henry VI., of four Sundays in harvest, thus making all fairs on Sunday illegal.

These Sunday laws of Great Britain are embodied in a greater or less degree in the Sunday laws of this country, every State in the United States with the exception of Louisiana, and every territory with the exception of Arizona, Utah, and the Indian Territory, having deemed it wise to enact something of the same. The usual course of legislation in each State or Territory has been to enact some general law modelled on the English statutes or on that of some other State, and when subsequent acts have been passed the law has generally been rendered more strict.

But notwithstanding this general conviction respecting the wisdom and beneficence of the Sabbath, and these increasing appliances among the most enlightened nations for its better observance, we are to-day mourning over what seems to be its increasing desecration. This, however, ought not to surprise us. It only represents a universal tendency among men. Singular as it may seem, the fact is clear that human nature is far more active in throwing away its privileges than in preserving them. Arts and literatures and social refinements have been discarded by those who professed them far more frequently than they have been retained. If we look at the actual facts

unblinded by any theory which prejudices them, we fail to find any inherent law of progress to a better state in human nature. On the other hand, the truth revealed is that of an inherent law of deterioration. Civilized nations have often become savages when left to themselves; savages left to themselves have never become civilized. Upward impulses, with man as with nature, come first from above. Nature does not improve itself, but all its culture comes from men who have themselves been cultivated. The desert or the wilderness left to itself, or left to the savage, remains a desert or a wilderness still; while in the presence of the cultivated man surrounding nature takes on the type of his culture, the desolations of the desert rejoice, and the wilderness buds and blossoms as the rose. But let the human skill which has converted the waste into a garden be discontinued and the garden becomes a waste again. We can trace the process by which the golden and luscious pippin has been brought out of the brown and bitter crab, but it is only by man's skilful grafting, planting, and pruning that this result has been secured, and not by any spontaneous process through which the coarser stock has evolved itself into the finer one. So of all our cultivated flowers and fruits; they have been gained by arts of man and not by any original and unaided tendencies of nature, and if the skill which has produced them should cease its care, they themselves would cease and only the wild and worthless originals would remain. In like manner, man finds all his improvement in a divine incentive and not in any impulse original to himself. A divine gift and not any human creation is the source of all human progress, and when men have renounced this gift and sought to go forward by their own appliances the invariable result has been that these appliances have become more and more inapt, and the efforts to employ them have become more and more feeble, until progress has ceased and the means of progress have been lost altogether.

We shall not, therefore, counteract the downward tendencies of human nature by seeking to stem them through barriers which human nature itself can provide. We shall not stop the increasing desecration of the Sabbath by demonstrating its folly through any increasing disclosure of the advantages of this sacred day. Nothing is easier nor more common than to have

the understanding convinced of the better course while the man actually chooses and follows the worse. In the practical conduct of life men are not governed by their understandings but by their sentiments, and if we shall ever exercise a living power over men it can only be by influences which reach the fountain of their sentiments, their heart, their will.

Can we gain such a power by appealing to the sentiment of duty? Can we, in the case in hand, secure the desired regard for the Sabbath by arousing the conscience to see and feel that such a regard is not only advantageous but right and obligatory? Doubtless the sentiment of duty has shown a mighty power in human life. What revolutions in character, what wonders in life it seems to have achieved! And yet with the great majority of men, to-day or at any time, the sentiment of duty seems utterly powerless. Does it control men generally, or has it ever done so? Some men doubtless seem to do the right by the simple constraint of obligation. They seem to be kept from doing wrong simply because it is wrong; but is this true? has it ever been true since the fall of the great mass of mankind? Nothing is more plain than that vice and crime of any sort run riot with human life in defiance of the most undoubted sense of obligation.

The morality taught by Socrates, by Zoroaster, by Confucius, by Shakya-Muni, was in many respects of unblemished purity and was proclaimed with unsurpassed power; but it did not change men; it did not raise the people to whom it was taught; it did not prevent them from sinking to a lower and lower depth of degradation. In no nation in the world is the virtue of truthfulness taught more earnestly or more prominently than in the schools of China to-day, yet in no nation is duplicity more evidently the rule of life. Says Dr. Wells Williams in his "Middle Kingdom" (vol. ii. p. 96): "There is nothing which tries one so much when living among the Chinese as their disregard of truth. Their proneness to this fault is one of the greatest obstacles to their permanent improvement as a people, while it constantly disheartens those who are trying to teach them." Unless we can add to the constraint of a moral principle the command also of a moral sovereign, no

appeal to the sentiment of duty and no awakening of that sentiment will ever make it actually dominant over men.

Morality does not save men. It has never saved them. It has no power to produce any correspondence to itself in human life. I do not enter here at all upon the question whether there have ever been individual instances of men who have changed from vice to virtue by moral precept alone; leaving that question to be answered as it may, this much at least is evident, and is all I here desire to urge, that the preaching of morality, however clear, however vigorous, has always proved a failure so far as the mass of men are concerned; it has never gone down deep into society and molded it internally and from the centre with a regenerating and vivifying power. Hence, I argue, we shall not succeed in securing the desired observance of the Sabbath if we only add to the evidence of its obvious advantages, the evidence also of its equally obvious moral obligations. Men are just as likely in the present and will be just as likely in the future to turn their backs upon both these evidences as they have been in the past.

Religion is the only potency which has ever shown itself adequate to improve men. The preaching of God's Word and of God's Will has renovated human hearts, and renewed the face of society; it has succeeded when every other agency has failed; it is doing this in unnumbered instances at the present day; and if we study either the facts of human nature or of history, we are warranted to expect help and success in the future from this and from no other source. Let us, therefore, light our torches at the sun, and while we recognize the Sabbath as a civil institution full of wisdom and beneficence, and therefore to be asserted by all the authority of the state, and deduce it also as a moral obligation to be urged with all the force the conscience can bring, yet as civil institutions no more perpetuate than they produce themselves, and as the sense of moral obligation is awakened and kept alive only by some religious quickening, let us not forget that the Sabbath, in order to be widely diffused and permanent, must come clothed with the power and crowned with the authority of God's legislation. I think we shall find that the weakening of the hold of the Sabbath upon

men is just in proportion to the weakening of their conviction of its divine authority.

Is it true, then, that we have such a command, a universal and perpetual command, of God that we recognize and reverence this day?

Certainly such would seem to be the case at the first view. The command to "remember the Sabbath day and keep it holy" stands in a code of which all the rest has confessedly a universal and perpetual obligation. Like the other nine commandments, this was all written by the finger of God, and was with them the first direct proclamation of the God of Abraham, of Isaac, and of Jacob to his chosen people through whom all the families of the earth should be blessed. There is nothing in the form or the terms of this command which indicate any narrower application or more limited authority than belongs to the others with which it is associated. It constitutes with them the testimony—thus termed by God himself—or witness of the divine will. We call it one of the ten commandments, but it is noticeable that they are not thus termed in Scripture. There, whenever they are spoken of together, whether in the Old Testament or in the New, they are called the ten words, a distinction quite remarkable. The word of God, the word of the Lord, expresses not simply a particular command, but rather announces the abiding source of all commands. The commands may often have only a local and temporary application, while the word of the Lord standeth forever. God himself, in his utterances to Moses, distinguishes between these words and the judgments or particular statutes which he commissions his servants to declare to his people. It is these ten words, and not the accompanying statutes, which are written by the finger of God on the tables of stone, and which are sacredly preserved in the ark, called the ark of the covenant because it bears the record of this testimony of God's righteous will, the announcement of which to his people is God's covenant with them. God's work in his kingdom of grace is thus analogous to his work in his kingdom of nature; the individual rests upon the species; the particular is upheld by the universal; the laws which are of local application, which belong to a time and a people, are first grounded on a law world-wide and eternal.

These considerations are not doubted, so far as I know, respecting any one of the so-called ten commandments, excepting the fourth. All the others are admitted to be of perpetual and universal obligation, but this, it is said, is Jewish and transitory ; all the others carry with them the evidence of their universality in their own statement, but this, it is said, is a positive institution whose ground is not seen by the natural conscience ; all the others have a substantial existence which neither the old dispensation could constitute nor the new change, but this is regarded as only the shadow of good things to come, the body of which is Christ. These views are held by many wise and excellent men, and demand our careful attention.

Certainly the reasons for refusing to one of these commandments the unlimited sway which confessedly belongs to all the rest should be so clear as to make it impossible either to mistake or to deny them. But this is far from being the case. When it is said that the Sabbath is only a Hebrew institution, it seems to be forgotten that the Hebrew Sabbath was not alone the Sabbath of the fourth commandment, but a particular and local Sabbath, based upon and representing the general provisions which the fourth commandment contains, but characterized by particular observances and enforced by special penalties, none of which are mentioned in, and all of which are independent of, the commandment itself. These particular observances, these special statutes and penalties, were doubtless wise for the Hebrews, for God enjoined them ; but they are not, therefore, wise for all men, and these might all disappear as a local and transient structure whose broad foundation stands unchanged and may be built upon forever. Whatever may be said, therefore, about the Hebrew Sabbath, whether it abides still for them or is done away for them and for all men, does not affect at all the question of the perpetual validity and obligation of the fourth commandment. Again, when it is said that the fourth commandment is not a universal and perpetual injunction, because the Sabbath is only a positive institution and contains no universal precept, we are led to inquire, What is a universal precept ? It is not necessary that it be universally acknowledged in order to be universally obligatory. It may be true and binding upon all men and yet only evidently true to some. It may

shine with a resplendent and self-revealing light, while there may be blurred or blinded eyes by whom it is not seen. The light shineth in darkness and the darkness comprehendeth it not; but this is not because the light is not light, but because the darkness is darkness. We must not say, therefore, that the fourth commandment contains no universal precept because we cannot see the ground on which the Sabbath rests, as we can see the ground for prohibiting murder, adultery, and theft. It is possible, to say the least, that to other intelligences the original basis of the Sabbath may be just as clear and just as self-evident, and therefore just as universal, as is the basis of chastity and honesty and truthfulness. A self-evident truth is not thereby instantaneously evident. All the truths of mathematics are self-evident, and yet they are not seen until the eye has been opened and taught to see. I do not suppose that a child in his earliest intelligence recognizes the obligations of the fifth commandment any more than some men recognize those of the fourth; but the obligations are there whether the child recognizes them or not, and would be there whether the commandment should announce them or not. I think it is quite possible that there may be many persons in the world, very ignorant persons doubtless, but yet persons who have never thought of the obligations of any of the ten commandments, and who would never think of them till they were taught and trained. Now if it be really better for mankind, as wise men unitedly affirm, that the daily routine of human toil should be interrupted by periods of rest from labor; if it be wise that the body have special times to rest from labor, and the spirit special times to give itself to worship, then a certain length and frequency of such periods is better than another; there is a wise division of such seasons, which to a vision sufficiently broad and clear must be just as evident and just as necessary as is the eternal requisition, "Thou shalt have no other gods before me." The distinction between a positive institution and a moral precept, as tho the one was grounded on an arbitrary enactment and the other rested on absolute righteousness, cannot in the least be maintained in reference to anything which God has enjoined. He does nothing arbitrarily. All his ways are perfect. He sees the eternal and unchanging reason for them all, and could his

subjects come to see his statutes in the light in which he must ever behold them, the distinctions which they now make between a law whose reason is apparent and a law whose reason is hid in the will of the Law-giver would forever disappear.

But it is surprising to me that the reason for the fourth commandment, the reason clearly stated in the commandment itself, is so greatly ignored, or at least is brought forward with so little prominence in the discussion of the Sabbath question: "For in six days the Lord made heaven and earth, the sea and all that in them is, and rested the seventh day." Here is a reason divinely announced for the divine injunction, "Remember the Sabbath day to keep it holy;" and if we only note this reason until we see its divine and glorious significance, I think we can never after doubt the universality or the perpetuity of the injunction to which it is attached. What does it mean, then, when it says God rested from his work, and therefore commanded man to rest? Man becomes weary from his labor and needs rest for his refreshment; but surely this is not true of God. He has wasted no power in his work which he needs rest to restore; and while man may find his rest a recreation from which he rises with new energy to his work, and while this may make it wise, must make it wise, for him to have his stated times for rest, this is only incidental and does not reach at all the high significance of the reason which requires him to rest because God rests. God rests because he is a spirit, and as a spirit finds completeness in his work. Nature never rests; nature never is complete. From day to night, from night to day, swifter than a weaver's shuttle, bringing life to death and death to life again, nature never finds a beginning which is not an end, nor an end which is not a beginning. "One generation passeth away and another generation cometh; the sun also ariseth and the sun goeth down, and hasteth to the place where he arose. The wind goeth toward the south, and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits." "Is there anything whereof it may be said, See, this is new?" Such is the ever-recurring question of nature, to which the ever-recurring answer of nature must be: "The thing that hath been it is that which shall be, and that which is done is that which shall be done, and

there is no new thing under the sun." But the answer of the supernatural, of the spiritual, is: "Behold, I make all things new." The spiritual originates and consummates, begins and finishes its work. And it is the announcement of himself as spiritual and supernatural when the Creator of the heavens and the earth beholds his work that it is good, and rests in the completeness of what he has done; rests not because he is weary, but because his work is worthy of him and needs no further repetition. There is thus something sublime in the primeval record: "Thus the heavens and the earth were finished and all the host of them. And on the seventh day God ended his work which he had made, and he rested on the seventh day from all his work which he had made. And God blessed the seventh day and sanctified it, because that in it he had rested from all his work which God created and made." And therefore it is meet that man made in the image of God should remember the Sabbath day to keep it holy, should perpetually hallow and sanctify the day whose announcement is God's witness to himself as spiritual and supernatural, and whose keeping is man's witness that he is supernatural and spiritual too. That the Sabbath is a day of rest from bodily labor, wherein man on his natural side finds rest and refreshment, is abundantly true; but this is only incidental, is but the means whereby man rises to his true spirituality and rejoices in communion with the Father of spirits. This is the reason for the Sabbath, and the law remains while the reason remains. Instead of the fourth commandment announcing what is sometimes called a merely positive institution arbitrarily enjoined, the true view shows us in this commandment the very ground on which the application of all the others rests. The commandments are not given to nature, but only to spirit. They have no significance save to the free will, and it is only in this fourth commandment that the free will implied in all the rest is explicitly declared, the free will of Him who made the heavens and the earth and in whose image man was made.

We learn from the record that the Sabbath was observed by the children of Israel before the ten commandments were given. "To-morrow," says Moses (Ex. xvi. 23), "is the rest of the holy Sabbath unto the Lord;" and again (verse 26), "The seventh

day is the Sabbath;" and once more (verse 29), "The Lord hath given you the Sabbath;" and still further (verse 30), "So the people rested on the seventh day." It is certainly remarkable that this is the only matter in the ten commandments which Moses lays before the children of Israel before the ten commandments were given; but this is not strange if the fourth commandment contains, as I think it does, the reason which justifies all the rest. The Sabbath thus is not a new institution commanded from Mount Sinai, but one already known which they are solemnly enjoined to remember. If the act of remembrance points backward to the beginnings of the human generations, the command to remember points as truly forward to their end.

I think we are warranted to say from all this that the fourth commandment is at least as universal in its obligations as any of the ten, and that while there was a Jewish law of the Sabbath which was local and which has passed away, this was wholly accessory to the fourth commandment and dependent thereupon, while the fourth commandment is as independent of it as are the second and fifth and sixth and seventh and eighth and ninth commandments independent of the particular Jewish laws against idolatry and disobedience to parents and murder and adultery and theft and false-witness.

Is there now anything in the New Testament which would set this doctrine of the Old Testament respecting the Sabbath in any different light? In the Old Testament representation the Sabbath appears as a blessing. The rest from labor which it enjoined was a privilege which all were to enjoy. "In it thou shalt not do any work," etc. This not only was a privilege, but was recognized as such by the early keepers of the Sabbath, and is now recognized as such by all who carefully contemplate it, even by those who look no farther than its physical and natural relations. It would be strange, therefore, if the new dispensation with its larger blessings were to abridge or do away with any of the blessings of the old.

In studying the New Testament, it is quite evident that the true doctrine of the Sabbath was exceedingly important in our Lord's eyes, as we see from the prominence with which he brings it forward both in his works and his words. I need not note the

points, sufficiently familiar, which illustrate this. But in them all two truths stand out with great distinctness, and which together constitute Christ's full teaching in this matter. The first is that the Jewish attachments to the Sabbath were largely corruptions and perversions, which not only might be disregarded but which should be set aside; and the second is that the Sabbath itself is quite distinct from Jewish observances, and has a ground and meaning quite independent of these. When he says, "The Sabbath was made (*i.e.*, became) for man," I do not see how we can avoid the conclusion that he is here looking at a universal fitness of the Sabbath for a universal human need; and when he says, in justification of his work of healing done upon the Sabbath day, "My Father worketh hitherto, and I work," it seems equally clear that he is here placing the Sabbath again upon its original grounds in God's work, which, complete as creation, continues also as a preserving energy, which is at the same time complete. Because the Sabbath is made for man, the Son of man, he in whom manhood is truly reproduced, the Divine Man is Lord of the Sabbath day, whose utterances respecting it admit of no appeal, and must be for all men. The more one ponders on the prominence of the Sabbath in the teachings and the life of Christ, and the more one penetrates to the meaning of this institution as illustrated by Christ's words and his example, the greater, I think, must be his sense both of its importance and its universality. Christ's teachings here as elsewhere come before us in large outline. They suggest rules rather than announce them. But their suggestions are seeds which in a good soil will bear their fruit after their kind, and in a healthy soul will formulate themselves in rules for the practical observance of the day, indicative both of its sacredness and its beneficence.

As we pass from the Gospels to the Epistles, from the teachings of Christ to those of the apostles, we are struck with the brevity and the obscurity of all allusions here to the Sabbath. The apostles speak of it in few words, and these not clear. In the Epistle to the Hebrews we find it distinctly asserted that there remains a Sabbatizing for the people of God, but whether this Sabbatizing which remains in the Christian dispensation after the Jewish dispensation has passed away is something to

be enjoyed upon earth or only in heaven, is a matter of dispute among excellent interpreters of the Bible. In the Epistle to the Colossians it is said, "Let no man judge you in meat or in drink, or in respect of a holy day, or of the new moon, or of the Sabbath days, which are a shadow of things to come; but the body is of Christ." But whether the Sabbath days here mean the weekly Sabbaths or the annual religious festivals of the Jews, to which the term Sabbaths was often undoubtedly applied, is a question to which different students of the Bible of perhaps equal piety and learning have given different answers. In the Epistle to the Romans Paul says: "One man esteemeth one day above another; another esteemeth every day alike. Let every man be fully persuaded in his own mind." But whether Paul here refers at all to the Sabbath day, or whether, if he does, he means to give any rule respecting its observance, is not clear.

Equally scanty is the evidence respecting the views of the early church about the Sabbath in the two or three centuries succeeding the New Testament times. So far as we can discover from the monuments still remaining, the doctrine of the Sabbath entered very little into the teachings of those times. The early fathers make as little mention of it as the apostles themselves; and from anything which they say in all their writings we could hardly argue either that they did or that they did not regard the observance of the Sabbath as obligatory upon them. Some have inferred from this that the Sabbath was so evidently abrogated in the Christian dispensation that there was no occasion for mentioning it in the early church; but then why should our Lord himself refer to it so often and so prominently, and why should he so clearly, while freeing the day from Jewish admixtures, set it before us in its universal human significance? This silence of the apostles and the fathers can be more easily explained on other grounds. In Christ's own teachings—more valuable, more suggestive, more significant by far than had they been formulated into definite rules of action—there was quite enough to furnish rules when the time for their announcement should come; but that time was not in the apostolical and early Christian age. Rules for the observance of the Sabbath have large relations to society. It is impossible

that they should be enforced in opposition to dominant social and civil influences. To a servant of a pagan master, to a child of pagan parents, work upon the seventh day might be as necessary as work upon any other: regular rest upon that day would doubtless be impossible; and thus, however desirable a Sabbath might be for them and for all, they would need to wait for its complete enjoyment, as the world waited for the Messiah himself, till the fulness of the time should come. But as the world was prepared for the coming of the Messiah before he came, so there were antecedent steps which we can hardly look upon as other than preparatory for the establishment of the Christian Sabbath as a definitely recognized institution of the Christian world. I think it must seem to every one quite significant in this respect, that it was very nearly the beginning of the Christian era—not before that time, and not later than the second century—that the division of time into weeks had come to be the common usage both among the Greeks and the Romans. It is also quite clear, both from the apostles' writings and those of the early fathers, that the Lord's day was recognized as a day of special joy and rest and worship. "Even business is to be put off upon this day," says Tertullian, "lest we give place to the devil." There is no doubt, moreover, that both the seventh day and the first day of the week were both observed with special sacredness for a considerable period in the early church; the observance of the seventh day, so far as we can learn, tho the evidence is obscure, gradually lessening and the observance of the first day growing in prominence, until Constantine's famous edict only gave a formal expression and a governmental sanction to a usage already established in the thoughts and the customs of the Christian world. It was the Lord of the Sabbath day who had given with his parting command and benediction his parting promise also to his disciples, "Lo, I am with you alway, even unto the end of the world;" and who can doubt that it was in the fulfilment of this word that the ongoings of history and the sentiments of the church were ordered so that the Sabbath, having become the Lord's day, should enthrone itself in the perpetual affection and reverence of the Lord's people?

It is sometimes said that as in the gospel dispensation we

are not under law but under grace, therefore the law can no more be obligatory upon us, and that it is to forget the liberty wherewith Christ maketh us free and be entangled again with the yoke of bondage when we insist upon commandments as rules of life. Our actions should be prompted, it is said, by the inner behest of the spirit, and to be controlled by laws and commandments is to fall from grace. There is a certain truth in this, enough to make it plausible and give it currency with some minds, but there is also a certain ignoring of the truth. To those who are under the Gospel, in whom its spirit lives, the law has become translated into a life, its external obligation has become an inner inspiration; but are its obligations thereby relaxed? has it thereby any the less constraint? Is the law against theft any the less a law or any the less obligatory where people are perfectly honest through an inner inspiration than where they are only kept from theft by the shere force of the law? The law has become translated into a life, but has it lost its authority in the process? Nay, has it not rather gained in authority, as the command of a father grows in its constraining force in exact proportion to the growing love and reverence of his child? I think we fall into a very serious error when we argue that the law of commandments has lost its force in the Gospel. "Stand fast," says Paul, "in the liberty wherewith Christ hath made us free;" but we are not to forget that liberty is not a disregard of law, but an obedience to the law; the bondage has become changed to freedom not by a change of the law, but by the changed motive for obedience to the law. The law is truth, and it cannot, therefore, be set aside; the law is right, and it must, therefore, be always obligatory. There is the same law in the old dispensation and the new, and precisely the same obedience thereto is required in both. The difference is that through the new motive now brought in the obedience which failed before is now secured. This is precisely as Paul argues in the Epistle to the Romans: "For what the law could not do in that it was weak through the flesh, God sending his own Son in the likeness of sinful flesh condemned sin in the flesh, that the *righteousness* of the law might be fulfilled in us who walk not after the flesh but after the spirit." The law requiring righteousness is not relaxed, but is rather intensi-

fied in the Gospel, as argues the author of the Epistle to the Hebrews: "For if the word spoken by angels [*i.e.*, the law given from Mount Sinai] was steadfast, and every transgression and disobedience received its just recompense of reward, how shall we escape if we neglect so great salvation, which at the first began to be spoken by the Lord?" "I came not to destroy the law," said He who was both Lord and Christ, "I came not to destroy, but to fulfil." The love to the Law-giver with which the grace of God in the Gospel inspires us, and which transforms the commandments of God into divine benedictions, leads the soul to a loyal devotion whose depth and breadth and intensity elevate and glorify as not before, the authority of the law. "Do we then make void the law through faith? God forbid; yea, we establish the law." We must come back, therefore, to the original ground of the Sabbath; and here the presentation of its claims may rest—as a divine institution, made for man, made because the unmade Wisdom saw its fitness for man's need, made as a witness that the Creator of the heavens and the earth is a spirit, and made for man as a testimony also to his own spirituality. The law remains while the reason remains.

JULIUS H. SEELYE.

AGNOSTICISM IN KANT.

I.—KANT *versus* HUME.

DAVID HUME was the philosophical father of modern Agnosticism. His sceptical conclusions are the natural fruit of a philosophical system as logical as it is subtle and ingenious. Hume was an empiricist holding uncompromisingly that all knowledge is derived from experience. This proposition seems harmless enough, for in a certain sense knowing and experiencing are the same thing. But when it grows more and more obvious, as we follow his exposition, that Hume is bent on evolving not merely knowledge but the faculties of knowledge from empirical elements, we begin to hesitate. For while we may persuade ourselves that it makes little difference practically how knowledge originates, since we know what we do know, "our home-bred fancies" rebel against the attempt to derive our faculties of knowing from experience; and the revolt grows deeper when examination has led to the discovery that experience means in Hume's nomenclature not that body of consciousness which we are wont to designate by that term, but simply the impressions of sense as they come to us without organization or relation. Impressions are the sole originals from which spring the individual himself as well as his mental history. Hume's Sensationalism goes to the root of the matter, and it is simplicity itself.

Beginning with the elements and following his clear exposition, we learn that impressions of sense, which must not be mistaken for perceived things, impress copies of themselves on the sensuous organism as a seal makes its impression on the soft wax, and thus arises a second class of psychological elements. There are impressions of sense which have neither objective

basis nor relations among themselves, and the derived copies of these which Hume styles ideas. Our ideas, we are told, are simply copies of our impressions. Hume makes a clean cut between impressions of sense and ideas, and acknowledges the former alone as original.

Bearing this in mind, we may clearly apprehend the true character of Hume's sensationalism. His impressions are mere organic affections, and they have no relations except the mere external and accidental ones of coexistence and succession. We discover in the mind, however, not merely ideal copies of these impressions, but associating threads which first combine the isolated copies of impressions into ideas of objects and then associate these objects together in a system of nature.

The impression is the demiurge which fabricates the structure. This material architect employs two agencies in his operations: first, by *direct impact*, as of a seal on wax, he produces all ideas and such relations, as those of time, space, resemblance, which have no existence apart from the impressions and are therefore copies of them; and secondly, by *constant repetition* of the same orders among impressions certain *habits* of association are built up among their corresponding ideas, by virtue of which, when one member of the company presents himself to the mind, we look instinctively for the others to follow. These instinctive habits are Hume's equivalents for the faculties by which we cognize what we suppose to be the relations among things. And his aim is to show that these relations have no objective existence, but are simply subjective cohesions among ideas created by the constant recurrence of certain orders of contiguity among the impressions of sense.

Hume makes short work of ideas. They are images or phantasms of impressions. Take the ideas of space and time. It is Hume's doctrine that space and time are mere ideas. Space cannot, however, be derived from any impression. But it is a copy of the relative positions of a number of impressions or of the different points in one impression. It is thus an image or phantasm like the rest of our mental furniture. It is easy to see from this that space relations arise from viewing impressions under the idea of space. Hence externality collapses and the

testimony of our senses to an external world in space falls to the ground. In like manner the idea of time is derived from the succession of our ideas. Time relations are merely ideas and impressions cognized under the idea of time. Hence the testimony of consciousness to the existence of a self in time falls to the ground and the inner world breaks up into a multitude of mental states or ideas.

Thus with a few bold strokes Hume demolishes the external world of objects, leaving no substitute but a mass of organic affections, and the internal world of self, leaving nothing in its place but a moving panorama of phantasms. Primary cognition gives nothing but impressions and their ideal photographs.

But the higher mental processes are equally helpless. There are two bridges which seem to lead outside of impressions and ideas to objective realities. These are the relations of identity and causality. Hume styles them relations which cannot be referred to any impressions of which they are copies. It is incumbent on him, however, to show how they are derived from impressions, or in default of this to admit that they are genuine mental principles. *Identity* underlies memory and is the basis of the affirmation that the object called book is not a group of passing impressions but a permanent reality, the same object which we cognized as book yesterday. It is likewise the ground of the affirmation that the thinking self is no mere catena of fleeting phantasms, but the same self to which the phantasms were present yesterday. There cannot, it is plain, be any identity of impressions and ideas. If identity is a reality, it points to a permanent ground of impressions and ideas. But Hume labors to cut the nerve of identity by showing that it is all a mistake, and that what we *call identity* is merely the *close resemblance* of *impressions* and *ideas* which are in reality different. The group of impressions we call book to-day so closely resembles the group we called book yesterday that the mind slips unconsciously from one to the other, and in the end mistakes one for the other. This explanation, if valid, removes the necessity of presupposing any persistent object, and leaves the sentient individual shut up within the sphere of his own feelings. *Causality* leads us to infer a pin or some other

external ground of the sharp prick of pain which we feel in our organism. To admit the validity of this inference would establish the reality of external objects apart from impressions. But Hume's ingenuity is equal to the emergency. He seeks to break the force of this inference by referring the causal judgment to a Sensational origin. Identity, when analyzed, vanishes and leaves resemblance in its place. Causality collapses under Hume's analysis into mere sequence in time. Impressions follow one another in certain orders of time, and some of these orders never change. For example: two impressions, A-B, stand for lightning and thunder. These impressions always recur in the same order, the lightning preceding the thunder. Now, argues Hume, the constant repetition of the same order of impressions produces a cohesion between the phantasms of these impressions so strong that when the phantasm of lightning presents itself to the mind the phantasm of thunder necessarily follows. This *necessary cohesion* of ideas which makes it unavoidable when one comes up that the other should follow, Hume styles causality. Viewed apart from any particular antecedents and consequents, the causal judgment is, according to this explanation, merely an instinct or a subjective necessity of looking for the absent member of an invariable sequence when one member is present to the mind. It furnishes no grounds for inferring either a self or external objects, but points simply to an antecedent or consequent in the chain of impressions or ideas.

Hume thus aims to destroy all the principles which connect our mental states with an external or an internal substance, and to hedge us in with the wall of our own impressions. But the effect does not rest here. In reducing identity to resemblance, *memory*, which testifies to identity, loses its foundation and becomes a mendacious witness, being a mere habitual mistake, and the *reasoning faculty*, whose vital nerve is causality, when causality collapses into time sequence, loses its rationality and is forced to take its place as an instinct begotten by the invariable sequence of the impressions of sense. But the only equivalent for mind in Hume's philosophy is the sum total of these instincts, and it is, therefore, literally true that he derives both the mind and its knowledge from the impressions of sense.

Two conclusions spring naturally out of Hume's principles: First, that the cognitive powers cannot pierce the veil of sense. To cognize is to feel an impression. Whether there is any reality outside of the organism impressing it, the consistent Humian is unable to decide. Secondly, that the thinking faculties are affected by a similar inherent weakness. Thoughts are mere phantasms of impressions, and the thinking faculty is simply the associational links between phantasms, which have been forged by constant repetition of the same orders of impressions. Thinking is, therefore, having before us a more or less complex copy of the impressions of sense. Neither in thought nor in cognition can we pierce the sensuous veil in which we are enswathed. It follows that the realities in the midst of which we live and move and have our being lie beyond the limits of our vision, and mortals are doomed to move about perpetually "in a world unrealized." The theory that we can neither know nor even conceive realities existing outside of the sphere of sense is absolute Agnosticism. Hume is therefore the philosophical father of that doctrine in its most radical form.

Hume's suppression of both knowledge and faith roused Kant from his dogmatic slumbers and induced him to join issue with the sceptic. He saw that Hume's principles, if carried to their logical conclusion, would undermine all certitude, leaving science in as bad a dilemma as theology. Hence the aim of Kant's criticism is twofold: first, to establish a solid basis for *knowledge* within the province of sense; secondly, to discover a rational ground for *belief* in the reality of the supersensual.

The Sensationalism of Hume may be stated in two propositions: first, that the only original elements in knowledge are impressions of sense; secondly, that from these elements both the relations cognized and the faculties of knowing are derived. Kant does not admit either, but accepting Hume's doctrine that nothing but impressions can be given by the unaided senses, he proceeds to show that from them neither faculty nor relation can be derived.

But the dispute is not about experience as it is. Kant and Hume find the same elements in *matured* experience. The question at issue is not, what *is*, but what is *original*? Sensa-

tionalism makes sense the first principle of the intellectual life. But Kant, considering the constitution of knowledge and the relations of things, reaches a different conclusion. His analysis brings into clear relief a fact which Hume tried to ignore; namely, that knowledge contains elements which differ radically from the qualities of sense. The impressions of sense as such are relationless. They come trooping into the sensorium through the various avenues of sight, hearing, and touch, and within they form a heterogeneous multitude with no more coherence among themselves than stones on a highway. They give no account of themselves; they come without credentials. From them it is impossible to learn whether any more of their kind are to be expected or not. Lastly, they are limited in extent. The impressions which any individual organism can feel must cover a very small area in comparison to the whole scope of nature. The experience of the senses is confined to the individual, or, in Kant's terminology, it is subjective, forming a basis for individual assertions but not for general propositions. In short, experience derived from the senses is *relationless*; it is *contingent*, and it is *limited to the individual organism*.

From these considerations follow two conclusions in regard to Sensationalism which lie at the basis of the Kantian philosophy. First, the impressions being a disorganized multitude with no power to unite among themselves, the formation of an organized individual experience from them without introducing other agencies is impossible. All relation presupposes a common ground of relation among the things related, but impressions have no common ground. They are as independent as the monads of Leibnitz, while lacking the internal riches of the monads. Secondly, allowing that an individual experience may somehow arise out of impressions, it can never transcend the limits of a purely individual experience. The limit of consciousness is the feeling in the organism, and supposing sensation to be equal to the cognition of the rising of the sun in the east, the only affirmation that could be made on Sensational grounds would be the purely individual judgment, "I have an impression or a phantasm of the sun rising in the east." The generalized judgment, "The sun rises in the east," would have no validity, for in

it the individual would be going outside of his own impressions and affirming a fact as valid for all men. .

Knowledge, however, is made up of general propositions. The particular affirmation, "This stone is heavy," states a fact, but it is of no use to the individual who affirms it or to any one else until it is freed from its individual limitations and stated in the general proposition, "Stones have weight." The body of knowledge is made up of such general propositions. Particular facts are simply the data from which they are derived. Sensationalism as above shown cannot go beyond the particular fact. How, then, are those general empirical propositions like the above, which constitute the body of scientific knowledge, possible? It is not true, as some have said, that Kant concedes the empirical judgments to Hume and bases his answer on such judgments as causality, which by virtue of their necessity transcend experience. He takes his stand at the fountain of knowledge and shows that Sensationalism cannot account for the general proposition in which all knowledge expresses itself. But Kant rests satisfied with no mere negations. After exposing the inadequacy of Hume's principles, he proceeds to develop a positive doctrine of his own. If the impressions of sense cannot produce knowledge, what additional elements must be presupposed as conditions of its possibility? A Natural Realist who holds that in sense-perception the mind cognizes objects and not mere impressions will see little utility in that part of Kant's philosophy which treats of the elements that enter into the constitution of objects. He will be disposed to look on this as misdirected ingenuity. But whether we agree with Hume and Kant or not that the senses begin with impressions out of which objects must be constructed before they can be cognized, we ought to have enough of candor and insight to acknowledge that, inasmuch as it devolves on Hume to build up a world of objects out of impressions, Kant's reasoning, which goes to show that simple impressions cannot form themselves into objects, has great force and utility as an *argumentum ad hominem*. Bearing this in mind, we will not lose our patience when we find Kant insisting that the impressions of sense are a pure multiplicity having no relations among themselves, and that the *combining* principles which group them together into objects must be

brought in from some source outside of the impressions. They cannot spring from impressions, and they are not identical with impressions. But without their offices to associate, for example, the impressions of sight and touch which constitute the object book, these elements would not come together and the group of impressions called book would not be formed. At the basis of our mental life, therefore, some other agents besides impressions of sense are needed, and those agents do not pertain to sense; that is, they are mental principles, co-ordinate and contemporaneous in their functions with the impressions of sense. Impressions are the materials, the mental principles the architects which work them up into the things and systems of things which we call nature. *Hume's impressions must become things before they can serve any purpose. But they cannot become things without the offices of mental principles. Therefore the Sensationalist must call in mental principles before he can take a single step.* This is Kant's reasoning, and whatever our philosophical creed we must admit its cogency.

But the objects of cognition are divisible into *things* and the *relations* among things. The relations which Hume classified accordingly as they could or could not be resolved into ideal copies of impressions are next considered by Kant. If impressions could not supply the synthetic principles which are necessary to combine them into objects, much less can they account for the relations among things. The synthetic principles and the relations from the lowest to the highest belong to the same intellectual system. Kant reviews these relations in his discussion of the categories. Keeping in view Hume's derivation and classification of relations we will not be at a loss for the motive that actuates Kant in his labor. He wishes to bring to the light and vindicate the intellectual basis of Knowledge. Knowledge he concedes cannot transcend the sphere of the senses. Impressions are a necessary element in the constitution of knowledge; for, as he contends, to know is to intuit, and to intuit means, in his nomenclature, the contact of an impression of sense with a mental principle. It follows that knowledge cannot outstrip actual or possible sensation. The general proposition on which knowledge rests is, therefore, an empirical proposition, the experience of the individual generalized and

made valid for all men. But to generalize and give objective validity to the experience of the individual is a task of which unaided sense is not capable. We have seen that impressions are wholly in the organism of the individual impressed. His ideas are copies of these. His affirmations spring from his ideas. Each individual, if Sensationalism is true, is a little isolated universe enclosing within its narrow walls all that the individual can know. His affirmations cannot reach beyond his own impressions. To this fact Kant applies the term *subjective*. If Hume's philosophy be true experience is strictly subjective, and from it each individual can affirm only that such and such facts are true *to him*, not that they are generally true to all men. But such affirmation is the negation of knowledge. The essence of knowledge is the affirmation of the *general validity* of facts for all men. This is what Kant means by objective validity, and he contends that while Hume cannot lift experience out of its subjectivity, knowledge transcends it by virtue of its objective validity. The affirmation of a general fact presupposes a general principle at its basis. The intuitionist meets the difficulty by affirming that the mind *perceives* things as existing external to and independent of its own cognitive act. For example, a tree is perceived to stand out external to us, and we affirm on this ground that what is objective to us will be objective to all other persons who bring their perceiving faculties into relation to it. In like manner the facts about trees, as for example that a tree is a vegetable, are perceived to be external in the same sense and hence objective.

But Kant is not an intuitionist. Mind in his view is a cogitating, comprehending principle which takes cognizance of matter that comes within its own sphere. But it cannot look outside of itself and contemplate things as external and independent. Conceding to Hume that experience begins with impressions, and is therefore subjective, as above explained, he shows first that experience cannot rise out of the pit of its own *subjectivity*, and then points to the fact that all the propositions which constitute knowledge are statements of *objective* facts. From this he argues that experience in Hume's sense is inadequate to produce knowledge. Experience is and of itself must continue subjective; but knowledge is objective, and by virtue of its ob-

jectivity transcends the power of experience. Hume assumed one class of original elements, the impressions of sense, as adequate to account for knowledge, but Kant's analysis shows the incompetency of the impressions and the necessity of assuming another class of original elements as grounds of its possibility. The first call for these elements was in the constitution of things out of impressions, and now we have a second call for their services in deriving general statements possessing objective validity from our subjective experience. Knowledge presupposes, as the condition of its objective validity, the agency of those self-same mental principles which Hume strives so hard to evolve from experience.

But Kant's vindication has a third and more important stage in which he lays hold of the iron clue of necessity and from it develops the distinctive feature of his philosophy. He meets Hume's doctrine that all knowledge is empirical in its origin and therefore limited and contingent with the fact that necessary judgments lie at the basis of all knowledge and enter into its constitution. At the basis of Mathematics are the axioms, at the basis of Physics the necessary affirmations of identity and causality. That a straight line is the shortest distance between two points, or that two straight lines cannot enclose a space, are facts which we see at once to be universally true. We affirm them immediately and unconditionally on bare inspection without any mediate or discursive process. Now, assuming that the experience of the senses can give rise to general empirical propositions, which Kant denies, the characteristic of all such propositions is that we know them to be absolutely true only so far as they have been *observed* to be true. Beyond the limits of observation there is a possibility of failure, and the recognition of this possibility is the element which makes all propositions founded on generalizations from experience contingent. The ground of them is limited, hence they cannot be affirmed with full certainty to be universally true. Hume's recognition of this fact led him to deny the existence of universals and strive pertinaciously to drive necessity out of the field of knowledge. The mathematical axioms, he contends, tho possessing a high degree of certainty, are yet derived from observation and are contingent. Kant points to the fact that

certitude is reached in mathematics at a single bound, and that, notwithstanding Hume's denial, its axioms are universally true and recognized to be so on bare inspection. He meets Hume's attempt to undermine the higher rational judgments of which causality may be taken as the best example, by similar reasoning. Causality is a fact which, like the truths of mathematics, we recognize to be universally true. Altho our experience is limited, we yet affirm the impossibility of a single exception to the causal rule anywhere in the universe. Hume contends that the necessity of the causal judgment is a subjective inability to break the association which the constant recurrence of the same order of impressions has wrought between their ideal copies. But Kant shows that the limitedness of experience makes it incompetent, tho ever so uniform, to produce such an association. Men are not hoodwinked by their experience, but clearly recognize its limitations; and were causality an empirical fact, it is not supposable that they would be wholly blind to that circumstance. Even instinct is not addicted to lying, but generally corresponds to some objective reality. The causal judgment is an intellectual judgment. *The recognition of the contingency of empirical judgments is the result not of the limited extent of experience, but of the intellectual apprehension of that fact.* If the causal judgment rested for its authority on empirical evidence, the intellectual apprehension of that fact would destroy its certainty, and men would come to regard it as not absolutely certain that every change has a cause. Such a result would, however, amount to a virtual suppression of knowledge. Knowledge must rest on certitude. At the basis of all science must be truths which are wholly beyond dispute. The possibility of science depends on the existence of necessary truths. Kant vindicates knowledge by discovering at its basis truths which are seen to be universally true; and he vindicates the faculties by the conclusion that inevitably follows. *If these universal truths can neither be derived from the experience of the senses nor recognized by faculties of sense, the powers which cognize and affirm their existence must transcend the province of sense with respect both to their nature and origin.* The categorical judgments, as Kant styles the affirmations of necessary truths, presuppose mental or spiritual principles as their

source; and these spiritual principles are identical with the synthetic powers which combine impressions into things, and with the agents which transform the facts of subjective individual experience into objectively valid truths. Kant thus establishes for scientific knowledge within the sphere of sense a solid basis, and at the same time lifts the mental faculties above the range of Hume's criticism.

II.—KANT THE AGNOSTIC.

There is a distinction between Agnosticism and Scepticism. Agnosticism denies knowledge, Scepticism denies belief. The agnostic who asserts the impossibility of a knowledge of supersensual objects may acknowledge valid grounds for a belief in them. But the sceptic, if thoroughgoing as Hume was, will not concede standing ground to either knowledge or belief. Kant was an agnostic but no sceptic. His philosophy, while it fails to discover any basis for a *science* of the supersensual, does find a granite rock for the feet of rational faith. The candid critic of Kant who may feel called upon to expose the philosophical grounds of his agnosticism will not be slow to exonerate him from the charge of scepticism.

We have seen how Kant meets and destroys Sensationalism upon its own ground. If Kantism is true, Sensationalism is false; for the essence of Kantism is its vindication of the supersensual elements in knowledge. By analysis he discovers in knowledge facts which cannot be referred to or derived from sense. They must, therefore, be attributed to sources which transcend sense. Consequently there are lying at the basis of knowledge and entering into its original constitution certain supersensual or transcendental principles which considered as a whole are what is generally conceived to be mind or spirit. So far, then, as these principles operate we are supersensual. We pierce through the veil of sense just as a lofty mountain thrusts its head through the sheet of cloud that limits the terrestrial view, and naturally we ought to be able to know supersensual objects and realities. Here, however, we come upon a root of bitterness the sources of which I shall seek to lay bare in the remainder of this article.

What can we know is not the most profound question in mental science. There is a deeper one: *How* do we know? The answer of Sensationalism to this question, if logically consistent with its principles, must be that there is no way discoverable by the human faculties by which anything can be known. Now the opposite pole of this logic of despair is the philosophy of intuition. Stripped of all its accidents and viewed in its essential quality, the distinctive attribute of Intuitionism is the doctrine that mind is a *perceiving* essence, meaning that it has power to look directly into the nature of things and apprehend them in their reality. In accordance with this doctrine, cognition is the apprehension of the real. And the intuitionist discovers by analyzing the full act of cognition that it is separable into two parts. There is the outlook of the mind through the senses, perceiving objects, and the inlooking of it through consciousness, perceiving self. Hence there are two sources of intuitive knowledge, Sense-perception, to borrow Scottish terms, and Self-consciousness. With these two eyes we cognize objects as real things and ourselves as spirit. And upon the two classes of intuitions the intuitionist builds two general sciences; namely, upon the data of Self-perception a science of nature, and upon the data of Self-consciousness a science of mind or spirit.

Kant recognizes spiritual functions in knowledge, but he is no intuitionist. Mind can perceive neither self nor objective realities. It is true that Kant uses a term *anschauung* which is rendered *intuition* in English translations of his works. But his meaning is widely different from the English sense of intuition. In his theory mind does not primarily contemplate things but impressions. These impressions come in through the various sensuous inlets, and not till they have presented themselves within does mind have anything to do with them. But coming into contact with mind inside and being relationless, whereas mind is the source and principle of relation, the manner of the contact is the coming of the impressions into certain space and time relations to one another. They enter a confused multitude, but the first contact of mind clothes them with space and time relations and holds them out as objects of sense. Now, this contact between the impressions

and the mental principles, together with the metamorphosis that accompanies it, is the full fact which Kant denominates intuition. It is so denominated because it embraces the only direct contact that occurs between mind and the matter of sense. The cognitive process goes on to clothe these objects of sense with intellectual relations and arranges them into a system of nature. But after the first act in which the impressions become objects by virtue of being clothed with space and time relations, the mind is dealing directly with a composite thing which is one remove from the simple impressions of sense. Intuition, therefore, in the Kantian sense does not imply a *perceiving* mind. It implies merely a receiver and organizer whose power of comprehending is coextensive with its organizing function. But it can go no further. The impression is a barrier which it can neither penetrate nor transcend. With respect to the impression and what lies behind it in the external and internal worlds the mind is an agnostic.

At the basis of Kant's agnosticism we may lay this doctrine of his that mind is not perceptive. For if it cannot *perceive* things as they exist apart from itself, it must *receive* impressions and construct phenomenal things out of the elements of sense. It follows that the senses are the only inlets through which the raw material of things can be obtained, and hence Kant's doctrine that knowledge cannot transcend actual or possible intuition. The logical outcome is a theory which presupposes supersensual functions as conditions of knowledge, but denies that we can know anything outside of the sphere of sense. Non-empirical principles enter into the constitution of knowledge, but knowledge is circumscribed by the limits of experience.

Kant's theory of knowledge is adequate as long as the senses are competent guides. What is needed for ordinary experience is general rules on which we can rely. Such rules are possible, provided we have adequate grounds for positing *our* experience as valid for men in general. Kant discovers the grounds of such validity not in a fixed and uniform external order of things, but in common principles of cognition. In the Kantian world there is no fixed external object called spade which all men must perceive as a spade and nothing else. There is merely a mass of impressions, and were there no common conditions of

cognition in the mind one man might see a pair of tongs where another would see a spade. But if the conditions of cognition are so fixed and uniform that the mass of impressions constituted spade by one must be so constituted by all, there is a basis of objective validity and general rules become possible. A blind beggar standing at a street corner feels something pressing against his palm; he closes his fingers over it and discovers it to be round and hard. He examines it more carefully and makes out certain raised characters on its surface. At the conclusion of his examination he asserts that it is a shilling. In his affirmation he assumes the objective validity of his conclusion for mankind in general. But empirical knowledge can proceed a step farther. It can give general laws as well as general facts. The fact that in a certain position he has received a definite group of impressions creates in the mind of the blind beggar a faint expectation that if he takes the same position he will receive a similar group of impressions. By repeated experiments this expectation will be either strengthened or destroyed. If it is uniformly gratified, it will at length ripen into certainty and may be formulated as a law of experience. In this manner the laws of nature are constituted. They are merely inferences drawn from uniform experience. And they derive all their authority as bases of expectation for the future from their character as *analogies of experience*. These analogies of experience reach, according to the empiricist, the outside boundaries of the knowable. Kant and Hume are at one on the subject of the limits of knowledge. Both limit cognition to the sphere of sense. Both limit the validity of the reasoning faculties to inferences drawn from the data of cognition. But the senses give impressions merely, and these constitute an impenetrable veil, hiding from both the cognitive and inferential faculties the realities which lie outside. Both are phenomenologists, not realists. The vital difference between them lies, as I have shown, in the fact that Hume derives both knowledge and the faculties of knowledge from the impressions of sense, whereas Kant's analysis leads him to presuppose supersensual powers as conditions of the possibility of knowledge.

From which it will appear that altho mind is not perceptive, and cannot, therefore, pierce into the heart of things and appre-

hend realities, it is yet competent to give general rules for the guidance of men within the sphere of sense. Such is Kant's conclusion. *What he styles knowledge is not the apprehension of that which is in itself true, but of a rule which is objectively valid for all men as far as the experience of the senses extends.* The human mind might rest satisfied with this were it, as Hume affirms, a mere product of sense. It would then either be unable to conceive anything beyond the limits of sense, or would instinctively recognize all thoughts of the supersensual as false and vain. But our minds are not so fortunately or unfortunately constituted. Even when we deny the possibility of knowledge we cannot keep down the suspicion that our most vital interests lie in the region of the supersensual, and that there are truths in the nature of things which it deeply concerns us to know.

Kant's limitation of what he styles knowledge to the sphere of sense is absolute. But it does not follow that our mental powers are so circumscribed. To constitute knowledge they must receive the impressions of sense. But their function is the same whether they come into contact with matter of sense or not. The *rationale* of this is plain enough. The function of mind in the cognition of particular objects is, according to Kant, to furnish the concept-form of the objects. We cognize an object called chair. The function of sense in this cognition is to furnish a congeries of impressions. Mind applies to these impressions the *concept-form* of the object, and the result is the cognition of a chair. But impressions do not simply take their places in the concept-form of an object. This object is further cognized as belonging to a system of things called nature. This implies an additional mental function. The first act is the application of the concept-form to impressions in order to constitute objects. The second act is the application of the *relation-forms* to objects in order to constitute systems of things. Lastly, these relation-forms may, as *inference-forms*, go beyond immediate cognition and anticipate objects which have not as yet been given in intuition. In all this process, however, the mental function is perfectly distinct from that sense. It depends on sense for the materials out of which objects and systems of objects are constituted. But the possibility of its

action is independent of sense. It acts in accordance with its own nature. Its business is to form conceptions and ideas. And since this function is independent of sense, which is the limiting element in knowledge, it is *practically infinite* in its scope. It may drop its analogical character and may form conceptions of supersensual objects. It may dare even to form an idea of an infinitely perfect Being called God. Here Kant's spiritualism enables him to outstrip the Sensational-empiricist. The latter, deriving all mental functions from sensation, maintains that we cannot even in thought penetrate the veil of sense, and that our so-called ideas of transcendent objects are spurious. Kant acknowledges the legitimacy of these ideas. As conceptions they are as genuine as the conceptions of objects of sense, for they are formed in the same way. They arise from the completion of the mental process, and while not objectively valid they point out the true path of experience and set before the mind a goal of aspiration.

From the preceding, the philosophical grounds of Kant's denial of the possibility of supersensual knowledge may be readily apprehended. The mind naturally *thinks* on into the region of the supersensual, but its operations constitute knowledge only when it has impressions of sense to work with. The moment it passes the limits of sense impressions cease to present themselves, and the activity of the mind, instead of solid realities, creates nothing but empty conceptions. In the region beyond sense we can form ideas but cannot cognize objective realities. In the "Dialectic of Pure Reason" Kant examines the various grounds on which philosophers have endeavored to construct a science of the Supersensual. A spiritual science must rest primarily on a knowledge of the spirit that is in man. Kant acknowledges this, but is able to discover no basis for such knowledge. Mind is not perceptive; in the sphere of the object it finds, not things external to itself, but phenomenal things made by its own synthesis from the impressions of sense. If realities exist independently of the cognitive powers, they are by virtue of their independence unknowable. The theory that mind does not cognize things external to it but objects of its own construction may for convenience be termed phenomenology. The principles of Kant's phenomenology in

the sphere of sense-perception have been made, I trust, sufficiently clear. Rising into the province of *self-consciousness* we come into contact with his phenomenology of spirit. The intuitionist finds in self-consciousness the cognition of spiritual essence. We know ourselves by direct intuition, and upon these intuitions we build a Psychology, a science of the soul. But Kant's general doctrine that mind is not perceptive applies as well to self-consciousness as to sense-perception. In his analysis he distinguishes between what he styles the empirical and the rational consciousness. *The empirical consciousness is that inner feeling of self as affected which accompanies or rather forms a part of every mental act.* In an act of cognition, as Dr. McCosh explains it, we not only perceive a thing, but we perceive *self* as affected. In the act the self is cognized as a reality. But to Kant the self cognized in consciousness is as much a phenomenon as the object cognized through the senses. If we examine our mental operations we find that one class of them is composed of perceptions of objects in *space*, another of ideas or phantasms of these bound together in relations of *time*. In other words, we perceive objects and form mental images of them in the mind. These mental images come and go according to certain laws of association, and are constantly passing before us like pictures painted on the inner surface of a revolving sphere of which we are the motionless centre. This moving panorama of mental images is what Kant styles the empirical consciousness. And when we cognize an object in space, as for example a book, the feeling we have of being affected in time is simply the adjustment of the cognition to the mental image of book which has its own relations of time to other mental states. There is thus an outer and an inner stage to every cognitive act: the outer penetrated by a mental apprehension of an object *as in space*; the inner by an apprehension of a corresponding mental state or image *as in time*. The inner is composed of a multitude of mental images bound together in the order of time, just as the outer is composed of a multitude of impressions of sense bound together in the order of space. From this empirical consciousness, which lies wholly in the sensuous sphere, we must carefully distinguish what Kant styles the *rational consciousness*. Mental action is, according to Kant, the function of

mental principles. These are not one but many, corresponding to the different kinds of judgments affirmed by the mind. Each of these principles discharges its own function without dependence on any other. For example, the causal principle is the sole and independent source of the causal judgment. But at the root of every mental act is the conscious judgment, *I think*. How is that to be explained? Consciousness here expresses itself in its most primary form. It was seized on by Descartes as the starting-point of his philosophy. If there is a genuine act of self-knowledge, this is it. But Kant brings his critical method to bear on this affirmation, and reaches the conclusion that the consciousness involved in the predicate "think" is not a cognition or an intuition of self as essence, but a *consciousness of activity*. The mind or mental principle does not grasp itself in an act of intuition, but it *feels* its activity when it acts. Thus, while Kant recognizes this consciousness as the most fundamental and characteristic deliverance of the intellectual life, he declares it to be not an intuition of self but a feeling of activity. And since the mental act fails to cognize a real self, the "I" which is the subject of the affirmation cannot be known to be anything but a *conception* of an *ego* lying back of all mental action as the *logical condition* of *its unity*. Thus the highest principle of all knowledge, the self lying back of self-consciousness as its source, collapses under Kant's analysis into a mere *idea of unity*. The question whether self or spirit exists is left unsolved and unsolvable. Self-cognition is explained away as cognition of a phenomenal inner world composed of mental images, and rational self-consciousness shrinks into a feeling of activity, referring ultimately to a logical conception of unity. It is needless to follow Kant through the steps of his criticism of rational psychology. We have grasped his principle and can anticipate his conclusions. *Having no intuition of self to start from, a genuine knowledge of self is impossible and a science of the human spirit is left without foundation. And to attempt with the rationalists to argue syllogistically from the conception of self to its real existence, and hence to its freedom and immortality, is to attempt to build up a science without intuition, which is impossible.*

From self Kant passes over to the external world, or nature. He propounds to nature the question whether or not there are

valid grounds for affirming the existence of anything outside of the limits of sensuous intuition. The query is first put to the world of sense in space and time. The intuitionist looks on space and time as external realities, and finding himself wholly unable to fix any limit to either, feels justified in affirming their infinitude. It is clear that the evidence of the infinitude of the world of sense must be drawn, if at all, from space and time. In Kant's philosophy, however, space and time are not *external* realities coming in with the impressions of sense, but they are mental functions. Mental principles do all the work except providing the raw materials or impressions. They constitute these as objects and weave the objects into the web of relations. One of their functions is *spacing* impressions and objects; that is, *clothing* them *with space* relations. In like manner they *time*, or clothe with time relations, the internal world of mental states and images. Space and time are not *external* realities, therefore, but mental functions wholly subjective in their scope and nature. The conclusion from this is obvious. The *room* for things which seemed to be boundless collapses, and we are shut in by the walls of a phenomenal world from which there is no outlet. The known world, therefore, extends as far as the senses of men have been able to penetrate, but no farther. The knowable world, so far as not yet experienced, lies within the possible reach of the senses. Now experience is a growing quantity, and will for aught we know to the contrary continue to increase indefinitely. Hence we can affirm of the world of sense that it is indefinitely extensible. But since experience must ever remain a *finite* term, we have no valid grounds for affirming the infinite extent or extensibility of the world of sense. We can no more assert a *possible* infinity than we can assert an *actual* infinite.

If, however, the world of senses provides no outlet to a supersensual sphere beyond it, perhaps we can discover a door opening into this region from the world of the understanding. By the world of understanding Kant means those mental or spiritual principles whose presence in experience he so triumphantly maintains against Hume. From this point of view it is evident that the question, Does freedom exist, or Does natural law cover the whole scope of being? is simply another form of the question,

Have these spiritual principles objective validity outside of the sphere of sense, or are they objectively valid only within the phenomenal world? It is also clear that the question, Does a necessary being exist outside of the chain of phenomenal causation, or are all things contingent? is equivalent to the question, Does the mental principle of causality require us to go outside of the phenomenal for the First Cause of things, or does it oblige us merely to assume a phenomenal antecedent in the chain of natural causation for each phenomenal consequent? Here we touch the vital nerve which in Kant's philosophy connects cosmology with psychology. This world of understanding which "contains the foundation of the world of sense" is identical with the spiritual principles which together constitute mind. In the human soul they reach the stage of conscious activity, and here, if at all, they may be expected to take knowledge of their own essence and capacities. They prove themselves utterly incompetent to this task, however, and so, when we come upon them in nature, we find ourselves wholly unable to claim for them any objective validity apart from the world of sense. The world of understanding is objectively valid so long as it enters into the world of sense as the source of its organization and laws. But outside of the sphere of sense the principles of the understanding part company with the matter which furnished objects to their conceptions, and these henceforth are empty and objectively invalid. Consequently we can find no grounds for affirming either the existence of a world of freedom outside of sense or the necessity of a First Cause transcending the chain of natural causes.

Neither in *man* nor *nature* is Kant able to gain a foothold for a science of the supersensual. But his critique of theology is a natural outgrowth from his philosophy of man and nature. In man and nature as the source of their being, beneath them as their upholder and preserver and above them as their contröller, we conceive an infinitely perfect Being called God. Now in his criticism Kant examines the rational evidence for the existence of such a being. This evidence may be summed up in three main arguments, one drawn from the mind of man, the remaining two from nature. From the human mind Kant draws what he styles the Ontological proof of God's existence. In this proof

we proceed from the conception of a Supreme Being in the mind to infer the existence of an object corresponding to the concept. Kant's objection to this proof may be restated in a sentence. It is the function of the mind to form concepts; but these concepts become cognitions only when some matter of sense is brought into contact with the concept. And without cognition there is no object. The concept is empty, and no object can be derived from it either by analysis or inference. Hence, altho we have the idea of God in our mind, yet being a mere idea, we have no warrant for arguing from it to the existence of a Being corresponding to it. Kant has denied that mind can furnish any starting-point for the supersensual except ideas, and from ideas no object can be inferred. The proofs from *nature* partake of the limitations of the source from which they are derived. Kant has reached the conclusion, *first*, that knowable nature is finite; *secondly*, that there are no grounds in nature for a science of the supernatural. In view of these conclusions it is obvious that an argument like that from cosmology which infers the existence of God from the existence of nature falls short of the mark. Nature is a finite effect and presupposes merely a finite cause. The argument from design falls short in the same manner. Design implies a designer, but the design in nature so far as nature reveals it is finite. It therefore implies merely a finite author. Now the Ontological proof gives the idea of an infinitely perfect being, but can reach no corresponding object. On the other hand, the proofs from nature give an object, but this object is finite. This result is the natural and inevitable consequence of Kant's fundamental principles. The thinking power of mind is unlimited and naturally culminates in an idea of a most perfect being. But knowledge cannot transcend sense. Hence the utmost object that can be known is but finite. There is an unbridged and unbridgable chasm between the Ontological idea and the empirical proofs which renders them all inconclusive and leaves the existence of the divine spirit, like that of the human spirit, unknowable.

The outcome of Kant's speculative philosophy is the conclusion that a science of the supersensual is impossible, that the existence of a supernatural sphere and of objects that transcend sense is unknowable. This is frank agnosticism, and Kant per-

sists in it throughout all his philosophical writings. He might justly have been charged with scepticism had he rested in that state of well-balanced uncertainty which is the logical outcome of his speculative principles. But Kant is no sceptic. He believes firmly and devoutly in the realities of a supernatural world, and in his moral works he seeks to lay the foundations of a rational faith.

The primary aim of Kant's morality in its relation to his philosophy as a whole is to *complete teleology*. The design in the sensible world so far as it is revealed by nature proved on examination to be finite and justified the inference of merely a finite designer. Knowledge is bounded by sense, and if the *τέλος* is to be confined to the knowable we may give up the supersensual as mythical and fall back into a melancholy scepticism. But Kant when he looks into the moral nature of man finds there an end placed before him which in its scope penetrates the veil of sense into the supersensual and in the conditions of its fulfilment reaches onward to the infinite. To expose the nature, grounds, and implications of this end is the main purpose of his moral speculations.

Man, Kant affirms, must *act* as well as think. He is a practical as well as a theoretical being. He is determined to action by his *will*. Mind performing an act of knowledge is reason. Mind determining itself to action is *will*. Now just as in the pursuit of knowledge the mind must have an ideal before it as the spring and motive of its theoretical activity, so in action it must place before it as its motive a practical ideal. Drawing the parallel between man as a thinker and man as an actor thus far, Kant then dips down into consciousness and lays hold on the fact that the ideal of action *obliges* man to realize it. He has no option. To do or not to do is no question, for there is no alternative. He is obliged to *do*. The ideal of action presses him as an ideal of duty. It is a law which he is unconditionally bound to obey. This law not only enjoins obedience, but it places an end before man and commands its realization. That end is the *highest*, and the highest is perfection, practical or moral perfection. To call in question the obligation would be to repudiate the end, to deliberately resolve that the highest shall not be realized.

Unqualified obligation is a fact of consciousness, but it is an anomaly in a world of sense. The world of sense is limited; it can create impulses and inducements, but not obligations; its laws are qualified and hampered by conditions and limitations; its ends are relative and finite. It is clear that the world of sense is unable to create unqualified obligation. What then?

We must *postulate* something. First, in order that the unqualified law of duty may be valid man must be *free*. He must be free not only as transcending the laws of sense which is negative freedom merely, but as *subject to laws which transcend sense*. Negative freedom is consistent with mere lawlessness and could not account for the fact of obligation. But positive freedom presupposes law. If man is free in the positive sense, he not only transcends the laws of sense but is subject to supersensual laws. Spirit is free in the sense of being primarily subject to spiritual laws. Here then we discover the first rift in the veil of sense. Kant denies spiritual intuition. Mind cannot cognize itself as *essence* and, therefore, *free*. But in order that the moral law may not lose its binding power he postulates freedom, and thus freedom is found on examination to involve subjection to spiritual laws. But if spirit has laws of its own independently of sense, its existence is primarily independent of sense. Thus the fact of unqualified obligation furnishes the ground on which the human spirit rests the postulate of its own substantial reality. And the fact of obligation resolves into the mind's recognition of the supremacy of its own laws over those of sense. *Secondly*, in order that the end which the moral law obliges us to pursue may be attainable we must postulate (a) the *continuity* or *immortality* of spirit. Freedom implies the substantial reality of spirit. The end placed before man by the moral law is not only a spiritual end, but it is *perfect*. In the speculative sphere we found the ideal of knowledge unattainable because it was a perfect (infinite) ideal, whereas the knowable is a finite quantity. But in the practical province there is an unavoidable obligation resting on us to realize the perfect end of the moral law. This is impossible in the present life. Hence we postulate the continuity of spirit, its survival of the death of the body, or the personal immortality of the human soul. (b) We must postulate the *existence of God*. The moral

end is the highest good, and this involves not only perfection of character on which the postulate of immortality is founded but the perfect *happiness* of the agent as the just reward of his obedience to the moral law. But nature and man, in so far as he is a moral being, are independent of each other. They are liable to collide, and they do collide in fact. These collisions are liable to interfere with and even to wreck the happiness of the moral agent. At the foundation of man and nature, therefore, as the First Cause of both we must postulate a Being who is capable of acting in accordance with the conception of this harmony between merit and reward, and who is capable of carrying his idea into execution, *i.e.* bringing man and nature into ultimate harmony and realizing the end of a perfect moral law. This Being must, in short, be both the *First* and *Final Cause* of all things. *From the First Cause of a finite effect we could only reach a finite being, but as the Author and Finisher of an infinite purpose through man and nature we are forced to postulate an infinite God.*

We thus reach a supersensual world and supersensual objects on moral grounds. But they are not secured as facts of knowledge. They are moral postulates. Man is placed in a dilemma. The moral law presses him with unqualified obligation. He is bound either to repudiate the law or assume the conditions of its fulfilment. But a moral being will say, Let the moral law be fulfilled tho the heavens should fall. Hence the necessity of postulating freedom, immortality, and God. They are moral necessities, but not known facts. And the fact that our conviction of their existence rests not on *cognitive* or *logical* grounds, but on *moral necessity*, distinguishes them as objects of *rational faith*.

While establishing a basis for belief, Kant does not repudiate his agnostic principles. The rational basis of his moral system is his doctrine of liberty. In his speculative philosophy Kant left the existence of freedom in doubt. It could not be cognized as a fact. We might entertain it as a hypothesis, but with the comforting assurance that it is unverifiable. Kant *makes this speculative conclusion the starting-point of his moral philosophy*. Freedom lies at the basis of his moral system not as a *proved fact* but as an *assumption*. But the fact that the validity of the moral law depends on the reality of freedom gives

us a strong moral reason for assuming it to be true. Kant is thus a consistent agnostic, but at the same time a rational believer.

III.—BASIS OF KNOWLEDGE.

Common-sense asserts that we know things as they are, and the religious consciousness asserts that we know God. Now philosophy can assume neither the truth nor the untruth of these judgments. Its function is to examine the foundations in order to ascertain what can be known. But if the final conclusions of philosophy are such as to confirm the judgments of the common consciousness of mankind, so much the better for both. The philosophical principles will gain a wider acceptance, and the tendency of speculative minds to regard consciousness as a mendacious witness will be cured. It would be both unfortunate and inexplicable were an ultimate contradiction to be found to exist between consciousness and truth. There are strong reasons at least for assuming that the philosophy which posits such a contradiction is defective in some of its principles.

Kantism posits such a contradiction between the thing of knowledge and the substantial reality as it exists apart from the cognitive act of the mind. This I apprehend to be the starting-point of most of Kant's agnostic conclusions. And the source of the contradiction is his failure to recognize the *perceptive* character of mind. To perceive is to thoroughly embrace and comprehend. A mind which is perceptive will thoroughly embrace and comprehend things. It will not from inherent weakness allow the thing to escape, and embrace a phenomenal substitute. In Kant's view, however, mind comprehends nothing but its own activity. It understands things so far as it *constitutes* them, but the element which is independent of its function, the impression of sense, is an unexplained and unexplainable residuum. It points to something back of the phenomenon as its ground; but since mind is not able to penetrate its *incognito*, no inference in regard to the nature of the background can be drawn. So the knowable thing is cut off from the real thing, and we are powerless to remedy the evil, altho painfully conscious that we have missed the substantial reality.

To see the evil and to remedy it are two different things. It is one thing to assert that we know things as they are, and quite another to show adequate grounds for the assertion. It seems to me that Descartes was right in deriving all knowledge from self-knowledge. Restating his principle so as to make it affirm that self-knowledge is not an inference from consciousness but the very voice of consciousness itself, we have a clue by which we can thread the universe of things and solve the agnostic contradiction. The consciousness of self from this point of view is no mere logical conception, but a direct apprehension of self as spiritual essence or principle. Suppose Kant had, like Descartes, made self-knowledge his starting-point, would he have stumbled into any distinction between phenomena and things in themselves? The thing in itself turns out to be the ground of the phenomenon, the reason for its existence. Back of the thing is its causality, or the reason for its existence. But reasons are spiritual facts, and Kant, who fails to apprehend spirit in man, as a consequence of this first incompetency fails to apprehend the reason of things. Beneath the world of things is a world of reasons. Separate the two and the former are phenomena, the latter things in themselves. Hume not only separated things from their reasons, but refused to acknowledge the *necessity* of reasons, making the appearance all in all. From the appearance he sought to deduce the so-called reality as a quasi-product, and so landed in a sensationalism which at root is thoroughly irrational. Kant restated against Hume the necessity of a rational foundation for what exists, but missing the clue of self-knowledge he was only able to assert that the relations of things exist because we *affirm* their existence, not that we affirm them because they exist. Had he taken consciousness as true self-knowledge, he would have been able to refer the judgments by which we affirm these relations to a perceiving mind or spirit. And this spiritual substance would have stood out as the ground of both the cognition and the objective relation perceived. A careful analysis of the causal judgment, as it is styled, reveals the fact that it is not a necessary inference but the positive affirmation of a fact. Its true test is self-evidence, and nothing but a *perceived fact* can be self-evident. But causality is a spiritual fact, and hence the causal

intuition is a perception of the spiritual basis of things in general. The apprehension of this basis brings the thing in itself within the grasp of knowledge. Consciousness thus enables us to reach a stand-point from which the contradiction between knowledge and reality disappears. The thing and its rational basis are both held in the iron grasp of apprehension, and agnosticism in the objective sphere falls to the ground.

In the sphere of spirit we are confronted by the questions of Freedom, Immortality, and God. In Kant's speculations the reality of the supersensual world is made to hinge on the question of freedom. And since freedom can neither be affirmed nor denied on speculative grounds, the question of its existence is left indeterminable. But in the moral nature of man facts are brought to light which without affecting the speculative evidence render it *morally obligatory* to *assume* freedom as a reality. If, however, consciousness is self or spiritual perception, the conditions are wholly changed. Freedom in its positive sense is equivalent to the possession of a constitution and laws not derived from sense. Now, consciousness decides that question by a *coup d'œil*. *If spirit is perceptive, consciousness is spiritual intuition, and the cognition of spirit as essence is the cognition of it as free.* For freedom in the sense of being subject to spiritual laws cannot be in question after the substantial reality of spirit has been ascertained.

With freedom as a known fact, morality no longer rests on a hypothesis. It rests on a basis of spiritual intuition. The law of obligation is a fact of consciousness, and freedom, which is its guarantee, is also known by intuition. The bearing of this on the existence of God is obvious. Kant postulates God as the necessary condition of the fulfilment of a *hypothetical law*. The validity of the law could not be established, for it depended on the question of freedom, of which no solution was possible. Hence it rested with men to decide in view of the practical interests involved whether the validity of the moral law should be affirmed or not. And on this decision hung the fate of the postulate of God's existence. But freedom is a fact of intuition, and the law has absolute validity in its own right. Man is a spirit, and the moral law is the law of his nature. He is therefore a being with an infinite destiny placed before him and

pressing him with unqualified obligation. The moral end of his being is as much a fact as his existence. Now, according to Kant's own principles, nature requires a First Cause adequate to its ascertainable scope. On the same grounds the spirit of man requires a First Cause adequate to its ascertainable scope. The *τέλος* of spirit is infinite. Therefore its First Cause is infinite. We thus reach on *logical* grounds, arguing from *moral facts*, the *knowledge* of a Being whose existence on Kantian grounds could only be held as the postulate of a rational faith.

In the light of the preceding, the relative value of the *theistic arguments* founded respectively on man and nature will not be hard to determine. Nature as a whole, so far as knowable, is finite and furnishes valid grounds for inferring merely a finite First Cause. The teleology in nature, so far as ascertainable, is also finite and leads to the same result. The evidence from nature is worthless to prove the *existence* of *God*. It proves nothing but a finite demiurge. But the case is different when we turn to man. Theologians have a fashion of slighting the Ontological proof. In so doing they fail to recognize their most impregnable stronghold. The Ontological proof, when truly apprehended, is an inference from the spirit in man to the existence of a Divine Spirit. Now, from the mere existence of the human spirit, which is finite, only a finite author can be inferred. The perception of this fact had its influence, no doubt, in inducing philosophers to desert the solid ground of intuition and found their Ontological proof on the *existence* of the *idea* of God in the mind. Against all such Kant's criticism is conclusive. The mere existence of an idea is no valid ground for concluding to the existence of its object. But if we go back of the idea and ascertain the *reason* of its existence we will discover a more solid ground for inference. Why should men conceive the First Cause of all things to be a Being infinitely perfect and Supreme in all his attributes? A little reflection will show that such a conception is the offspring of the moral nature of man. As a moral being he cannot conceive the Author of all things to be anything but Supremely Good and Great. And this necessity arises out of a cognition of the moral ends of his own being. The moral law sets an infinite end before him, and imposes on him an unqualified obligation to realize that end. The conception of

a *Supreme Being* springs directly from the *perception* of the fact that the Author of an infinitely perfect end must himself be in finite. Its true foundation is *moral telcology*, and moral teleology founded on intuition, not on a hypothesis, as Kant supposed, is as valid a basis for logical inference as the evidence of design in nature. The Ontological proof derives its cogency from the fact that instead of being a fine-spun creation of dialectical subtlety, it is a voice from the depths of the human spirit demanding a First Cause adequate to realize the destiny imposed on it by a perfect and inexorable moral law. And its value is enhanced by the fact that it is the only proof of God's existence that is logically sufficient. *From our own moral being we obtain data for concluding to the existence of an infinite First Cause ; and having reached God through the spirit that is in man, we may go out into nature and discover his presence and agency in its constitution and laws.* For nature incompetent of itself to demonstrate the existence of the infinite is the "garment of God" to the mind whose knowledge of him rests primarily on other grounds.

Thus by starting with self-knowledge the agnostic wall is broken down and we are enabled to cognize truth and reality. Self-knowledge is a luminary from which the light proceeds in every direction. It sends forth a ray into the external world, and in the light of it we perceive the thing of knowledge and the thing in itself to be one. It turns its beams inward and exposes the substantial reality and moral freedom of the spirit of man. And man and nature unite in affirming as their First Cause a Being infinitely Great and Supremely Good.

A. T. ORMOND.

THE ANTIQUITY OF MAN AND THE ORIGIN OF SPECIES.

AMONG the numerous books and articles constantly inviting the attention of readers to the subjects of evolution and the antiquity and origin of man, some are rather of an argumentative and polemical character than of the nature of original investigation ; others relate to new facts, and constitute actual contributions to the data of questions as yet too scantily supplied with fundamental truths. Of the former class many are interesting, able, and suggestive ; but it is on work of the second class that the actual settlement of these disputes must depend, tho in the mean time this may be comparatively unknown to the general reader, whose ideas as to the present state of these questions are likely to be derived rather from the confident assertions and well-put arguments of popular writers than from the more solid tho less showy and far less startling and less assured conclusions of actual painstaking work.

Of works which may claim to contain results of original and useful investigation, the following, which are now in the hands of scientific men and embrace a very wide range of inquiry, may afford the material for profitable discussion in this REVIEW : Dawkins on "Early Man in Britain" is a work limited in its range, but embracing the results of the investigations of an acute observer, well up in the paleontology of the more recent formations. Barrande's "Brachiopodes," extracted from the great work on the Silurian System of Bohemia, is the production of the first paleozoic paleontologist of our age, and with regard to the group to which it relates, as well as to the cephalopods and trilobites previously treated by the author in the same manner, is an exhaustive inquiry as to what they have to say for and against evolution. "Les Enchainements

du Monde Animal," by Gaudry, may be regarded as a popular book; but it is the work of one of the most successful collectors and expositors of the Tertiary mammalia. "Le Monde des Plantes," by Saporta, is also in some degree popular in its scope, but is replete with scientific facts admirably put together by a most successful and able paleo-botanist. Of the above writers Barrande is an uncompromising opponent of evolution as ordinarily held. In other words, he finds that the facts of the history of life in the Paleozoic period lend no countenance to this hypothesis. The others are theistic evolutionists, holding the doctrine of derivation with more or less of modification, but not descending to the special pleading and one-sided presentation of facts so common with the more advanced advocates of the doctrine. Perhaps we may most clearly present the salient points brought out in these works by noticing first the successive Tertiary periods and their life, culminating in the introduction of man, and secondly the facts as to the introduction of those earlier creatures which swarmed in the Paleozoic seas.

The Tertiary or Kainozoic period, the last of the four great "times" into which the earth's geological history is usually divided, and that to which man and the mammalia belong, was ingeniously subdivided by Lyell, on the ground of percentages of marine shells and other invertebrates of the sea. According to this method, which with some modification in details is still accepted, the *Eocene*, or dawn of the recent, includes those formations in which the percentage of modern species of marine animals does not exceed $3\frac{1}{2}$, all the other species found being extinct. The *Miocene* (less recent) includes formations in which the percentage of living species does not exceed 35, and the *Pliocene* (more recent) contains formations having more than 35 per cent of recent species. To these three may be added the *Pleistocene*, in which the great majority of the species are recent, and the *Modern*, in which all may be said to be living. Dawkins and Gaudry give us a division substantially the same with Lyell's, except that they prefer to take the evidence of the higher animals instead of the marine shells. The Eocene thus includes those formations in which there are remains of mammals or ordinary land quad-

rupeds, but none of these belong to recent species or genera, tho they may be included in the same families and orders with the recent mammals. This is a most important fact, as we shall see, and the only exception to it is that Gaudry and others hold that a few living genera, as those of the dog, civet, and marten, are actually found in the later Eocene. In the case of plants, as we shall find, Saporta shows that modern genera of land plants occur before the Eocene, in the last great group of the preceding period, and we have abundant American evidence of the same fact. As in the Mosaic narrative of creation, the higher plants precede by a long time the higher animals. The Miocene, on the same mammalian evidence, will include formations in which there are living genera of mammals, but no species which survive to the present time. The Pliocene and Pleistocene show living species, tho in the former these are very few and exceptional, while in the latter they become the majority.

With regard to the geological antiquity of man, no geologist expects to find any human remains in beds older than the Tertiary, because in the older periods the conditions of the world do not seem to have been suitable to man, and because in these periods no animals nearly akin to man are known. On entering into the Eocene Tertiary we fail in like manner to find any human remains; and we do not expect to find any, because no living species and scarcely any living genera of mammals are known in the Eocene; nor do we find in it remains of any of the animals, as the anthropoid apes for instance, most nearly allied to man. In the Miocene the case is somewhat different. Here we have living genera at least, and we have large species of apes; but no remains of man have been discovered, if we except some splinters of flint found in beds of this age at Thenay in France, and a notched rib-bone. Supposing these objects to have been chipped or notched by animals, which is by no means certain or even likely, the question remains, was this done by man? Gaudry and Dawkins prefer to suppose that the artificer was one of the anthropoid apes of the period. It is true that no apes are known to do such work now; but then other animals, as beavers and birds, are artificers, and some extinct animals were of higher powers than their modern

representatives. But if there were Miocene apes which chipped flints and cut bones, this would, either on the hypothesis of evolution or that of creation by law, render the occurrence of man still less likely than if there were no such apes. For these reasons neither Dawkins nor Gaudry, nor indeed any geologists of authority in the Tertiary fauna, believe in Miocene man.

In the Pliocene, as Dawkins points out, tho the facies of the mammalian fauna of Europe becomes more modern and a few modern species occur, the climate becomes colder, and in consequence the apes disappear, so that the chances of finding fossil men are lessened rather than increased in so far as the temperate regions are concerned. In Italy, however, Capellini has described a skull, an implement, and a notched bone supposed to have come from Pliocene beds. To this Dawkins objects that the skull and the implement are of recent type, and probably mixed with the Pliocene stuff by some slip of the ground. As the writer has elsewhere pointed out,¹ similar and apparently fatal objections apply to the skull and implements alleged to have been found in Pliocene gravels in California. Dawkins further informs us that in the Italian Pliocene beds supposed to hold remains of man, of twenty-one mammalia whose bones occur, all are extinct species except possibly one, a hippopotamus. This of course renders very unlikely in a geological point of view the occurrence of human remains in these beds.

In the Pleistocene deposits of Europe—and this applies also to America—we for the first time find a predominance of recent species of land animals. Here, therefore, we may look with some hope for remains of man and his works, and here, according to Dawkins, in the later Pleistocene they are actually found. When we speak, however, of Pleistocene man, there arise some questions as to the classification of the deposits, which it seems to the writer Dawkins and other British geologists have not answered in accordance with geological facts, and a misunderstanding as to which may lead to serious error. This will be best understood by presenting the arrangement adopted by Dawkins with a few explanatory notes, and then pointing out

¹ "Fossil Men," 1880.

its defects. The following may be stated to be his classification of the later Tertiary:

I. **PLEISTOCENE PERIOD**: the fourth epoch of the Tertiary, in which living species of mammals are more abundant than the extinct, and man appears. It may be divided into—

(a) *Early Pleistocene*, in which the European land was more elevated and extensive than at present (First Continental Period of Lyell), and in which Europe was colonized by animals suitable to a temperate climate. No good evidence of the presence of man.

(b) *Mid Pleistocene*. In this period there was a great extension of cold climate and glaciers over Europe, and mammals of arctic species began to replace those previously existing. There was also a great subsidence of the land, finally reducing Europe to a group of islands in a cold sea, often ice-laden. Two flint flakes found in brick earth at Crayford and Erith in England are the only known evidences of man at this period.

(c) *Late Pleistocene*. The land was again elevated, so that Great Britain and Ireland were united to each other and to the continent (Second Continental Period of Lyell). The ice and cold diminished. Modern land animals largely predominate, though there are several species now extinct. Undoubted evidences of man of the so-called "Paleolithic race," "River-drift and Cave men," "Men of the Mammoth and Reindeer periods."

II. **PREHISTORIC PERIOD**: in which domestic animals and cultivated fruits appear; the land of Europe shrinks to its present dimensions. Man abounds, and is similar to races still extant in Europe. Men of "Neolithic age," "Bronze age," "Prehistoric Iron age."

III. **HISTORIC PERIOD**: in which events are recorded in history.

I have given this classification fully, in order to point out in the first place certain serious defects in its latter portion, and in the second place what it actually shows as to the appearance of man in Europe.

In point of logical arrangement, and especially of geological classification, the two last periods are decidedly objectionable. Even in Europe the historic age of the south is altogether a different thing from that of the north, and to speak of the prehistoric period in Greece and in Britain or Norway as indicating the same portion of time is altogether illusory. Hence a large portion of the discussion of this subject has to be called by our author "the overlap of history." Further, the mere accident of the presence or absence of historical documents cannot constitute a geological period comparable with such periods as the Pleistocene and Pliocene, and the assumption of such a criterion

of time merely confuses our ideas. On the one hand, while the whole Tertiary or Kainozoic, up to the present day, is one great geological period, characterized by a continuous tho gradually changing fauna and series of physical conditions, and there is consequently no good basis for setting apart, as some geologists do, a Quaternary as distinct from the Tertiary period; on the other hand there is a distinct physical break between the Pleistocene and the Modern in the great glacial age. This in its arctic climate and enormous submergence of the land, tho it did not exterminate the fauna of the Northern Hemisphere, greatly reduced it, and at the close of this age many new forms came in. For this reason the division should be made not where Dawkins makes it, but at or about the end of his "Mid Pleistocene." The natural division would thus be:

I. PLEISTOCENE, including—

(a) *Early Pleistocene*, or First Continental period. Land very extensive, moderate climate.

(b) *Later Pleistocene*, or glacial, including Dawkins' "Mid Pleistocene." In this there was a great prevalence of cold and glacial conditions, and a great submergence of the northern land.

II. MODERN, or Period of Man and Modern Mammals, including—

(a) *Post-glacial*, or Second Continental period, in which the land was again very extensive, and Paleocosmic man was contemporary with some great mammals, as the mammoth, now extinct, and the area of land in the Northern Hemisphere was greater than at present. This represents the Late Pleistocene of Dawkins. It was terminated by a great and very general subsidence accompanied by the disappearance of Paleocosmic man and some large mammalia, and which may be identical with the historical deluge.

(b) *Recent*, when the continents attained their present levels, existing races of men colonized Europe, and living species of mammals. This includes both the Prehistoric and Historic periods.

On geological grounds the above should clearly be our arrangement, tho of course there need be no objection to such other subdivisions as historians and antiquarians may find desirable for their purposes. On this classification *the earliest certain indications of the presence of man in Europe, Asia, or America, so far as yet known, belong to the Modern period alone.* That man may have existed previously no one need deny, but no one can positively affirm on any ground of actual fact. I do not reckon

here the two flint flakes of Crayford and Erith already mentioned, because even if they are of human workmanship, the actual age of the bed in which they occur, as to its being glacial or post-glacial, is not beyond doubt. Flint flakes or even flint chips may be safely referred to man when they are found with human remains, but when found alone they are by no means certain evidence. The clays of the Thames valley have been held by some good geologists to be pre-glacial, but by others to be much later, and the question is still under discussion. Dawkins thinks they may be "Mid Pleistocene," equivalent to "Later Pleistocene" of the second table above, and that they are the oldest traces of man certainly known, but in the mean time they should evidently be put to what has been called "the suspense account."

Inasmuch, however, as the human remains of the post-glacial epoch are those of fully developed men of high type, it may be said, and has often been said, that man in some lower stage of development *must* have existed at a far earlier period. That is he must if certain theories as to his evolution from lower animals are to be sustained. This, however, is not a mode of reasoning in accordance with the methods of science. When facts fail to sustain certain theories we are usually in the habit of saying "so much the worse for the theories," not "so much the worse for the facts," or at least we claim the right to hold our judgment in suspense till some confirmatory facts are forthcoming.

Before leaving this part of the subject it may be well to remark the grand procession of mammalian life, beginning with the marsupial and semi-marsupial beasts of prey and low-browed and small-brained but gigantic ungulates of the Eocene and ending with man. There is here unquestionable elevation in rank, by whatever means effected. Gaudry inclines to some form of evolution, tho he piously refers it to the operation of the Creator. He thinks he can see traces of such evolution in the carnivorous animals, as derived from marsupials, and in the antelope and deer tribe, more especially in the development of horn and antler; and he traces the horse through a supposed ancestry of hipparia, etc., differing, however, from English and American evolutionists in making the *Paleotherium* the initial

link. This is, however, a matter of taste, as these genealogies may usually be traced with equal probability or improbability through any one of half a dozen lines. But in the case of some groups of animals, and these of the highest importance, he freely admits that derivation is at fault. The elephants and their allies the deinotheres and mastodons, for example, appear all at once in the Miocene period and in many countries, and they only dwindle in magnitude and numbers as they approach the modern. Gaudry frankly says: "D'où sont-ils venus, de quels quadrupèdes ont-ils été dérivés? Nous l'ignorons encore." The edentates, the rodents, the bats, the manatees are equally mysterious, and so are the cetaceans, those great mammalian monsters of the deep, which leap into existence in grand and highly developed forms in the Eocene, and which surely should have left some trace of their previous development in the sea. "We have," says Gaudry, "questioned these strange and gigantic sovereigns of the Tertiary oceans, as to their progenitors, but they leave us without reply," and he goes on to refer to several things in connection with their habitat, their reproduction, and their dentition or want of it, which make their sudden appearance still more inscrutable. It is refreshing to find a naturalist who, while honestly and even enthusiastically seeking to establish the derivation of animals, gives due prominence to the facts which, in the present state of knowledge at least, refuse to be explained by his theory. The reader may note here that the appearance of man fully developed in the Modern period is parallel with that of the elephantine animals in the Miocene and the whales in the Eocene, as well as with a vast multitude of other cases which meet the paleontologist in every direction.

In the world of plants, Saporta has a strangely different story to tell, tho its general plan evidently harmonizes with the history of mammalian life. If we keep out of view the few species of small marsupials that exist in the Mesozoic period, mammalian life in all its grandeur comes into existence at a bound in the Eocene. But it had been preceded for at least one great geological period by a vegetation similar to that now living. It can scarcely be questioned that the vegetation of the older geological periods, however rank and abundant, was

not well suited to sustain the higher herbivorous animals. Accordingly no such animals are known in these periods. But in the cretaceous age we find in the lower beds of that series some coniferous plants of living genera, and in the upper cretaceous modern generic forms come in, both in Europe and America, in great force. We have magnolias, oaks, beeches, ivies, ginsengs, plane-trees, poplars, palms, and a host of familiar forms, and some of these so closely resembling existing species that it scarcely requires the eyes of an evolutionist to see in them the ancestors of our modern trees. Thus an ample and long-continued preparation was made not only for the introduction of mammalian life, but even for giving to the landscape its existing features. It seems indeed strange that no precursors of the Eocene mammals have yet been found in connection with these plant remains of the newer cretaceous. There is a gap here in animal life which we may expect at some time to be filled. There seems, however, notwithstanding the great changes in climate and physical geography, to have been much less change from the cretaceous onward in the plant world than in the world of higher animal life, so that *Saporta* can figure series of leaves of plants of modern genera from the Eocene upward, showing so little modification that they may in some cases be regarded as scarcely more than varietal forms, while some of the species have undoubtedly survived without change through all the long ages extending from the beginning of the Kainozoic to the present day. Plant-life is in this analogous to the lower animal life of the sea, which presents the same unchanged characteristics in Eocene and Modern species.

To return to primitive man and the date of his appearance in Europe, an important question is raised by Dawkins in the attempt which he makes to discriminate between two races of men supposed to have existed successively in Europe in post-glacial times or in the Second Continental period. These he calls respectively "men of the river gravels" and "cave men." The idea of such distinction seems to have arisen in his mind from the fact that in certain caverns in England the lowest stratum containing human remains affords only rude implements, while an upper stratum appears to testify to improved manufacture of stone tools and weapons, both strata being of

so-called "paleolithic" age; that is, belonging to the time when certain mammalia now extinct survived. Such facts, however, would rather seem to testify to local improvement in the condition of certain tribes than to any change of race. Such local improvement would be very likely to occur wherever a new locality was taken possession of by a small and wandering tribe, which in process of time might increase in numbers and in wealth, as well as in means of intercourse with other tribes. A similar succession would occur when caves used at first as temporary places of rendezvous by savage tribes became afterward places of residence, or were acquired by conquest on the part of tribes a little more advanced, in the manner in which such changes are constantly taking place in rude communities. Yet on this slender foundation he builds an extensive generalization as to a race of river-drift men, in a low and savage condition, replaced after the lapse of ages by a people somewhat more advanced in the arts, and specially addicted to a cavern life; and this conclusion he extends to Europe and Asia, finding everywhere and in every case where rude flint implements exist in river gravels, evidence of the earlier of these races. But his own statements are sufficient to show the baselessness of the distinction. He admits that no physical break separates the two periods; that the fauna remained the same; that the skulls, so far as known, present no differences; and that even in works of art the distinction is invalidated by grave exceptions, which are intensified by the fact, which the writer has elsewhere illustrated, that in the case of the same people their residences in caves, etc., and their places of burial are likely to contain very different objects from those which they leave in river gravels. Perhaps one of the most curious examples of this, referred to by our author, is the cave of Duruthy in the western Pyrenees. On the floor of this cave lay a human skull covered with fallen blocks of stone. With it were found forty canine teeth of the bear and three of the lion, perforated for suspension, and several of these teeth are skilfully engraved with figures of animals, one bearing the engraved figure of an embroidered glove. This necklace, no doubt just such a trophy of the chase as would now be worn by a red Indian hunter, tho more elaborate, must have belonged to the owner of the skull,

who would appear to have perished by a fall of rock, or to have had his body covered after death with stones. In the deposit near and under these remains were flint flakes. Above the skull were several feet of refuse, stones, and bones of the horse, reindeer, etc., and "paleolithic" flint implements, and above all were placed several skulls and skeletons with "beautifully chipped" flint implements. After the burial of these the cave seems to have been finally closed with large stones. The French explorers of this cave refer the lower and upper skulls to the same race; but Dawkins, in consistency with his theory, has to consider the upper remains as "Neolithic," tho there is no conceivable reason why a man who possessed a necklace of beautifully carved teeth should not have belonged to a tribe which used well-made stone implements, or why the weapons buried with the dead should have been no better than the chips and flakes left by the same people in their rubbish-heaps.

The reasoning by which the author supports this distinction is throughout scarcely worthy of his reputation, and implies great carelessness as to modern analogies. The same remark may be made as to his identification of the cave men with the Esquimaux. What he says on this head would serve quite as well to identify them with other hunting and fishing people; with the Haidas of the Queen Charlotte Islands, for example, the Micmacs of Nova Scotia, or even the Fuegians. He exposes, however, the folly of the minute distinctions made by some French archæologists as to the ages of the remains in different caves, and which, as Lyell and others have insisted, prove no more than slight differences of wealth and culture among contemporary or immediately successive tribes.

Another point on which he well insists, and which he has admirably illustrated, is the marked distinction between the old paleocosmic men of the gravels and caves and the smaller race with somewhat differently formed skulls which succeeded them, after the great subsidence which terminated the Second Continental period and inaugurated the Modern epoch. The latter race he identifies with the Basques and ancient Iberians, a non-Aryan or Turanian people who once possessed nearly the whole of Europe, and included the rude Ugrians and Laps of the north, the civilized Etruscans of the south, and the Iberians

of the west, with allied tribes occupying the British Islands. This race, scattered and overthrown before the dawn of authentic history in Europe by the Celts and other intrusive peoples, was unquestionably that which succeeded the now extinct paleocosmic race and constituted the men of the so-called "Neolithic period," which thus connects itself with the modern history of Europe, from which it is not separated by any physical catastrophe like that which divides the older men of the mammoth age and the widely spread continents of the post-glacial period from our modern days. This identification of the Neolithic men with the Iberians, which the writer has also insisted on, Dawkins deserves credit for fully elucidating, and he might have carried it farther to the identification of these same Iberians with the Berbers, the Guanches of the Canary Islands, and the Caribbean and other tribes of eastern and central America. On these hitherto dark subjects light is now rapidly breaking, and we may hope that much of the present obscurity will soon be cleared away.

Another curious point illustrated by Dawkins, with the aid of the recent rediscovery of the tin-mines of Tuscany, is the connection of the Etruscans with the introduction of the bronze age into central Europe. This, when viewed in relation to the probable ethnic affinities of the Etruscans with the "Neolithic" and Iberian races, remarkably welds together the stone and bronze ages in Europe, and explains their intermixture and "overlap" in the earlier lake habitations of Switzerland and elsewhere.

We are also indebted to our author for a suggestion as to the linguistic connection of the Neocosmic and Modern periods, which is deserving the attention of philologists. He quotes from Abbé Inchaupé, the following Basque words:

<i>Aizcora</i>	=	Axe	=	Stone lifted up or handled.
<i>Aitzurra</i>	=	Pick	=	Stone to tear asunder.
<i>Aiztloa</i>	=	Knife	=	Stone, little or small.
<i>Aizturrac</i>	=	Scissors	=	Little stones for tearing.

He remarks that all these words are derived from the word *aitsa*, *atcha*, stone, tho now applied to implements of metal. The same thing occurs in many American languages, in which the word for stone, with appropriate additions, is applied to different kinds of tools. It is also curious that in some of the American languages the word for stone is almost identical with

that in Basque ; but this applies to some other Basque roots as well. Still it is not unlikely that the onomatopoeic sounds, *itz*, *aitz*, and the like, applied to stones and cutting instruments in many languages, in all cases arose from the use of sharpened stones in cutting and rending.

A still more important speculation arising from the facts recently developed as to prehistoric men is the possible equivalency with the historical deluge of the great subsidence which closed the residence of paleocosmic men in Europe, as well as that of several of the large mammalia. Lenormant and others have shown that the wide and ancient acceptance of the tradition of the deluge among all the great branches of the human family necessitates the belief that, independently of the biblical history, this great event must be accepted as an historical fact which very deeply impressed itself upon the minds of all the early nations. Now, if the deluge is to be accepted as historical, and if a similar break interrupts the geological history of man, separating extinct races from those which still survive, why may we not correlate the two. The misuse of the deluge in the early history of geology, in employing it to account for changes that took place long before the advent of man, certainly should not cause us to neglect its legitimate uses, when these arise in the progress of investigation. It is evident that if this correlation be accepted as probable, it must modify many views now held as to the antiquity of man. In that case, the modern gravels spread over plateaus and in river valleys, far above the reach of the present floods, may be accounted for, not by the ordinary action of the existing streams, but by the abnormal action of currents of water diluvial in their character. Further, since the historical deluge cannot have been of very long duration, the physical changes separating the deposits containing the remains of paleocosmic men from those of later date would in like manner be accounted for, not by slow processes of subsidence, elevation, and erosion, but by causes of more abrupt and cataclysmic character. This subject the writer has referred to in previous publications,¹ and he is glad to see that prominence has recently been given to it by so good a geologist as the Duke of Argyll, in a late number of the *Contemporary Review*.

¹ "Origin of the World," "Fossil Men."

It is a great leap backward to pass from the bronze age of Europe to the Paleozoic brachiopods of Bohemia; but both may furnish illustrations of the same natural laws, as both belong to the same long-continued creative work. Barrande, like some other eminent paleontologists, has the misfortune to be an unbeliever in the modern gospel of evolution, but he has certainly labored to overcome his doubts with greater assiduity than even many of the apostles of the new doctrine; and if he is not convinced, the stubbornness of the facts he has had to deal with must bear the blame. In connection with his great and classical work on the Silurian fossils of Bohemia, it has been necessary for him to study the similar remains of every other country, and he has used this immense mass of material in preparing statistics of the population of the Paleozoic world more perfect than any other naturalist has been able to produce. In previous publications he has applied these statistical results to the elucidation of the history of the oldest group of crustaceans, the trilobites, and the highest group of the mollusks, the cephalopods. In his latest memoir of this kind he takes up the brachiopods, or lamp-shells, a group of bivalve shellfishes, very ancient and very abundantly represented in all the older formations of every part of the world, and which thus affords the most ample material for tracing its evolution, with the least possible difficulty in the nature of "imperfection of the record."

Barrande, in the publication before us, discusses the brachiopods with reference, first, to the variations observed within the limits of the species, eliminating in this way mere synonyms and varieties mistaken for species. He also arrives at various important conclusions with reference to the origin of species and varietal forms, which apply to the cephalopods and trilobites as well as to the brachiopods, and some of which, as the writer has elsewhere shown, apply very generally to fossil animals and plants. One of these is that different contemporaneous species, living under the same conditions, exhibit very different degrees of vitality and variability. Another is the sudden appearance at certain horizons of a great number of species, each manifesting its complete specific characters. With very rare exceptions, also, varietal forms are contemporaneous with the normal form of their specific type, and occur in the same localities. Only in a very few cases do they survive it. This

and the previous results, as well as the fact that parallel changes go on in groups having no direct reaction on each other, prove that variation is not a progressive influence, and that specific distinctions are not dependent on it, but on the "sovereign action of one and the same creative cause," as Barande expresses it. These conclusions, it may be observed, are not arrived at by that slap-dash method of mere assertion so often followed on the other side of these questions; but by the most severe and painstaking induction, and with careful elaboration of a few apparent exceptions and doubtful cases.

His second heading relates to the distribution in time of the genera and species of brachiopods. This he illustrates with a series of elaborate tables, accompanied by explanation. He then proceeds to consider the animal population of each formation, in so far as brachiopods, cephalopods and trilobites are concerned, with reference to the following questions: (1) How many species are continued from the previous formation unchanged? (2) How many may be regarded as modifications of previous species? (3) How many are migrants from other regions where they have been known to exist previously? (4) How many are absolutely new species? These questions are applied to each of 14 successive formations included in the Silurian of Bohemia. The total number of species of brachiopods in these formations is 640, giving an average of 45.71 to each, and the results of accurate study of each species in its characters, its varieties, its geographical and geological range, are expressed in the following short statement, which should somewhat astonish those gentlemen who are so fond of asserting that derivation is "demonstrated" by geological facts:

1. Species continued unchanged.....	28.	per cent.
2. Species migrated from abroad.....	7	"
3. Species continued with modification, ..	0	"
4. New species without known ancestors.	65	"
		<hr/>
		100 per cent.

He shows that the same or very similar proportions hold with respect to the cephalopods and trilobites, and in fact that the proportion of species in the successive Silurian faunæ, which can be attributed to descent with modification is absolutely *nil*. He may well remark that in the face of such facts the origin of

species is not explained by what he terms "les élans poétiques de l'imagination."

The third part of Barrande's memoir, relating to the comparison of the Silurian brachiopods of Bohemia with those of other countries, tho of great scientific interest and important in extending the conclusions of his previous chapters, does not concern so nearly our present subject.

I have thought it well to direct attention to these memoirs of Barrande, because they form a specimen of conscientious work, with the view of ascertaining if there is any basis in nature for the doctrine of spontaneous evolution of species, and, I am sorry to say, a striking contrast to the mixture of fact and fancy on this subject which too often passes current for science in England, America, and Germany. Barrande's studies are also well deserving the attention of our younger men of science, as they have before them, more especially in the widely spread Paleozoic formations of America, an admirable field for similar work. In an appendix to his first chapter, Barrande mentions that the three men who in their respective countries are the highest authorities on Paleozoic brachiopods, Hall, Davidson, and De Koninck, agree with him in the main in his conclusions, and he refers to an able memoir by D'Archiac in the same sense, on the cretaceous brachiopods.

It should be especially satisfactory to those naturalists who, like the writer, have failed to see in the paleontological record any good evidence for the production of species by those simple and ready methods in vogue with most evolutionists, to note the extension of actual facts with respect to the geological dates and precise conditions of the introduction of new forms, and to find that these are more and more tending to prove the existence of highly complex creative laws in connection with the great plan of the Creator as carried out in geological time. These new facts should also warn the ordinary reader of the danger of receiving without due caution those general and often boastful assertions respecting these great and intricate questions, made by persons not acquainted with their actual difficulty, or by enthusiastic speculators disposed to overlook everything not in accordance with their preconceived ideas.

J. W. DAWSON.

THE HISTORICAL PROOFS OF CHRISTIANITY.

FIRST ARTICLE.

WRITERS on the evidences of Christianity, after some preliminary observations on natural theology, generally proceed at once to the subject of the genuineness and credibility of the gospels, for the obvious reason that in these books, if anywhere, is preserved the testimony to the facts connected with the life of Jesus. There are reasons, however, which have special force at present why this leading topic may well be postponed to a somewhat later stage of the discussion. Independently of the questions respecting the authorship and date of the New Testament narratives, there are weighty grounds for giving credence to the essential facts which form the ground-work of the Christian faith. It is important to remember that, besides these books, there are not wanting other memorials, written and unwritten, of the events about which we are concerned. We have Paul's Epistles, the most prominent of which are uncontested even by the sceptically disposed; the oldest of which—the first to the Thessalonians—was written at Corinth as early as the year 53. But, more than this, there are cogent proofs and there are strong probabilities, which may be gathered from known and conceded consequences of the life of Jesus among men. We can reason backwards. Even a cursory glance at Christianity in the course of its acknowledged history, and as an existing phenomenon standing before the eyes of all, is enough to convince everybody that something very weighty and momentous took place in Palestine in connection with the short career of Jesus. There followed, for example, indisputably, the preaching, the character, the martyrdom of the apostles. The church started into being. The composition of the gospels themselves, whenever and by

whomsoever it took place, was an effect traceable ultimately to the life of Jesus. How came they to be written? How did what they relate of him come to be believed? How came miracles to be attributed to him and not to John the Baptist and to Palestinian rabbis of the time? Effects imply adequate causes. The results of a movement disclose its nature. When we are confronted by historical phenomena, complex and far-reaching in their character, we find that no solution will hold which subtracts anything essential from the real historic antecedents. If we eliminate any of the conjoined causes, we discover that something is left unexplained. Moreover, the elements that compose a state of things out of which definite historical consequences proceed are braided together. They do not easily allow themselves to be separated from one another. Pry out one stone, and the entire arch will fall. It is a proverb that a liar must have a long memory. It is equally true that a historical critic exposes himself to peril whenever he ventures on the task of constructing a situation in the past, a combination of circumstances, materially diverse from the reality. Events as they actually occur constitute a web from which no part can be torn without being instantly missed. History, then, has a double verification: first, in the palpable effects that are open to inspection, and, secondly, in the connected relation, the internal cohesion, of the particulars that compose the scene. Let any one try the experiment of eliminating from the world's history any signal event, like the battle of Marathon, the teaching of Aristotle, or the usurpation of Julius Cæsar. He will soon be convinced of the futility of the attempt; and this apart from the violence that must be offered to direct historical testimonies.

Matthew Arnold tells us that "there is no evidence of the establishment of our Four Gospels as a Gospel Canon, or even of their existence as they now finally stand at all, before the last quarter of the second century."¹ I believe that this statement in both of its parts can be disproved; that the theory, at the basis of such views, of a gradual selection of the Four out of a larger group of competitive gospels, and of the growth of them

¹ "God and the Bible," p. 224.

by slow accretion, is a false one. It can be proved to rest on a misconception of the state of things in the early church, and to be open to other insuperable objections. But let the assumption contained in the quotation above be allowed, for the present, to stand. Such authors as Strauss, Rénan, Keim, notwithstanding their rejection of received opinions respecting the authorship and date of the gospels, do not hesitate to draw the materials for their biographies of Jesus from them. They undertake, to be sure, to subject them to a sifting process. We have to complain that their dissection is often arbitrary, being guided by some predilection merely subjective, or determined by the exigencies of a theory. Professing to be scientific, they are warped by an unscientific bias. But large portions of the evangelic narratives they admit to be authentic. If they did not do this, they would have to lay down the pen. Their vocation as historians would be gone. Now, then, we may see what will follow if we take for granted no more of the contents of the gospels than what is conceded to be true—no more, at any rate, than what can be proved on the spot to be veritable history. Waiving for the moment controverted questions about the origin of these books, let us see what conclusions can be fairly deduced from portions of them which no rational critic will consider fictitious. Having proceeded as far as we may on this path, it will then be in order to vindicate for the gospels the rank of genuine and trustworthy narratives, in opposition to the opinion that they are of later origin and compounded of fact and fiction.

I.

The known assertions of Jesus respecting his authority and office among men, if they are not well founded, imply either a lack of mental sanity or a deep perversion of character; but neither of these last alternatives can be reasonably accepted.

No one doubts that Jesus professed to be the Christ—the Messiah. This the apostles from the first, in their preaching, declared him to be. They went out preaching, first of all, that Jesus of Nazareth is the Messiah. It was on account of this claim that he was put to death. Before his judges, Jewish and Roman, he for the most part kept silent. Seeing that they were moved by passion and by purely selfish considerations, he

forbore useless appeals to reason and conscience. But he broke silence to avow that he was indeed the king, the "Son of God"—a familiar title of the Messiah.¹ It was held by the Jewish magistrates to be a blasphemous pretension.² He made it clear, then and at other times, what sort of a kingship it was which he asserted for himself. It was not a temporal sovereignty, "a kingdom of this world;" no force was to be used in the defence or extension of it. It was, however, a control far deeper and wider than any secular rule. He was the monarch of souls. His right was derived immediately from God. His legislation extended to the inmost motives of action, and covered in its wide sweep all the particulars of conduct. In the Sermon on the Mount he spoke with an authority which was expressly contrasted with that of all previous law-givers—"But *I* say unto you," etc.³ To his precepts he annexed penalties and rewards which were to be endured and received beyond the grave. Nay, his call was to all to come to him, to repose in him implicit trust as a moral and religious guide. He laid claim to the absolute allegiance of every soul. To those who complied he promised blessedness in the life to come. There can be no doubt that he assumed to exercise the prerogative of pardoning sin. Apart from declarations, uttered in an authoritative tone, of the terms on which God would forgive sin,⁴ he assured individuals of the pardon of their transgressions. He taught that his death stood in the closest relation to the remission of sins. The divine clemency towards the sinful is somehow linked to it. He founded a rite on this efficacy of his death—a part of his teaching which is not only recorded by three of the gospel writers, but is further placed beyond doubt by the testimony of the apostle Paul.⁵ He uttered, there is no reason to doubt, the largest predictions concerning the prospective growth of his spiritual empire. It was to be as leaven, as a grain of mustard-seed.⁶ The agency of God would be directed

¹ Matt. xxvi. 64, xxvii. 11, cf. vv. 29, 37; Mark xiv. 62, xv. 2, cf. vv. 9, 12, 18, 26; Luke xxii. 70, xxiii. 2, cf. vv. 2, 38; John xviii. 33, 37, cf. v. 39, xix. 3, 14, 19, 21.

² Matt. xxvi. 65; Mark xiv. 64.

⁵ 1 Cor. xi. 25.

³ Matt. v. 22, 28, 34, 39, 44.

⁶ Matt. xiii. 31-33; Luke xiii. 19-21.

⁴ Matt. v. 26, vi. 14, 15

to securing its progress and triumph. The government of the world would be shaped with reference to this end.

I have stated, in moderate terms, the claims put forth by Jesus. These statements, or their equivalent, enter into the very substance of the evangelic tradition. Not only are they admitted to be authentic passages in the gospels, but their historic reality is presupposed in the first teaching of Christianity by the apostles, and must be assumed in order to account for the rise of the church.

Let it be remembered that these pretensions are put forth by a person whose social position is that of a peasant. He is brought up in a village which enjoys no very good répute in the region around it. Among his fellow-villagers he has made no extraordinary impression. When he comes among them as a teacher, they refer to his connection with a family in the midst of them in a tone to imply that they had known of nothing adapted to excite a remarkable expectation concerning him.¹ For this passage in the gospel narrative bears indisputable marks of authenticity.

What shall be said of such claims, put forth by such a person, or by any human being? No doubt the first impression in such a case would be that he had lost his reason. If there is not wilful imposture, it would be said, there must be insanity. Nothing else can explain so monstrous a delusion. We have only to imagine that a young man who has always lived in some obscure country town presents himself in one of our large cities, and announces himself there, to his fellow-townsmen, and wherever else he can gain a hearing, as the Son of God, or Messiah; summons all, the high and low, the educated and ignorant, to accept him as a special messenger from heaven, to obey him implicitly, to break every tie which interferes with absolute obedience to him—to hate, as it were, father and mother, wife and children, for his cause. He proceeds, we will suppose, in the name of God to issue injunctions for the regulation of the thoughts even, as well as of external conduct, to forgive the sins of one and another evil-doer, and to warn all who disbelieve in him and disregard his commandments that retribution awaits them in the

¹ Matt. xiii. 55-57; Mark vi. 3. 4; Luke iv. 22.

future life. It being made clear that he is not an impostor, the inference would be drawn at once that his reason is unsettled. This, in fact, is the common judgment in such cases. To entertain the belief that one is the Messiah is a recognized species of insanity. It is taken as proof positive of mental aberration. This is the verdict of the courts. Erskine, in one of his celebrated speeches,¹ adverts to an instance of this kind of lunacy. A man who had been confined in a mad-house prosecuted the keeper, Dr. Sims, and his own brother, for unlawful detention. Erskine, before he had been informed of the precise nature of his delusion, examined the prosecutor without eliciting any signs of mental unsoundness. At length, learning what the particular character of the mental disorder was, the great lawyer, with affected reverence, apologized for his unbecoming treatment of the witness in presuming thus to examine him. The man expressed his forgiveness, and then, with the utmost gravity, in the face of the whole court, said: "I am the Christ." He deemed himself "the Lord and Saviour of mankind." Nothing further, of course, was required for the acquittal of the persons charged with unjustly confining him.

When it is said that claims like those of Jesus, unless they can be sustained, are indicative of mental derangement, we may be pointed, by way of objection, to founders of other systems of religion. But among these no parallel instance can be adduced to disprove the position here taken. Confucius can hardly be styled a religious teacher; he avoided as far as he could all reference to the supernatural. His wisdom was of man, and assumed no higher origin. A sage, a sagacious moralist, he is not to be classified with pretenders to divine illumination. Of Zoroaster we know so little that it is utterly impossible to tell what he affirmed respecting his relation to God. The very date of his birth is now set back by scholars to a point at least five hundred years earlier than the time previously assigned for it. Of him, one of the recent authorities remarks: "The events of his life are almost all enshrouded in darkness, to dispel which will be forever impossible, should no authentic historical records

¹ In behalf of Hadfield, indicted for firing a pistol at the king.

be discovered in Bactria, his home."¹ A still later writer goes farther: "When he lived, no one knows, and every one agrees that all that the Parsis and the Greeks tell of him is mere legend, through which no solid historical facts can be arrived at."² The history of the principal teacher of one of the purest and most ancient of the ethnic religions is veiled in hopeless obscurity. With respect to Buddha or Sakyamuni, it is not impossible to separate main facts in his career from the mass of legendary matter which has accumulated about them. But the office which he took on himself was not even that of a prophet. He was a philanthropist, a reformer. The supernatural features of his history have been grafted upon it by later generations. An able scholar has lately described Buddhism as "a religion which ignores the existence of God and denies the existence of the soul."³ "Buddhism is no religion at all, and certainly no theology, but rather a system of duty, morality, and benevolence, without real deity, prayer, or priest."⁴ Mohammed unquestionably believed himself inspired, and clothed with a divine commission. Beyond the ferment excited in his mind by the vivid perception of a single great, half-forgotten truth, we are aided in explaining his self-delusion—as far as it was a delusion—by due attention to the morbid constitutional tendencies which led to epileptic fits, as well as to reveries and trances. Moreover, there were vices of character which played an important part in nourishing his fanatical convictions; and these must be taken into the account. It is not maintained here that religious enthusiasm which passes the limits of truth should always raise a suspicion of insanity. We are not called upon by the necessities of the argument to point out the boundary-line where reason is unhinged. Socrates was persuaded that a demon or spirit within kept him back from unwise actions. Whether right or wrong in this belief, he was no doubt a man

¹ Haug, "Essays on the Laws, Writings, and Religion of the Parsis" (2d ed., Boston, 1863), p. 295.

² "The Zend-Avesta," translated by J. Darmestetter, (Oxford, 1880); Int., p. lxxvi.

³ See *Encycl. Britannica*, art. *Buddhism*, by J. W. Rhys Davis.

⁴ Monier Williams, "Hinduism" (London, 1877), p. 74.

of sound mind. One may erroneously conceive himself to be under supernatural guidance without being literally irrational. But if Socrates, a mortal like the men about him, had solemnly and persistently declared himself to be the vicegerent of the Almighty, and to have the authority and the prerogatives which Jesus claimed for himself; had he declared just before drinking the hemlock that his death was the means or the guaranty of the forgiveness of sins, the sanity of his mind would not have been so clear.

Nor is there force in the objection that times have changed, so that an inference which would justly follow upon the assertion of so exalted claims by a person living now would not be warranted in the case of one living in that remote age, and in the community to which Jesus belonged. The differences between that day and this, and between Palestine and America or England, are not of a quality to lessen materially the difficulty of supposing that a man in his right mind could falsely believe himself to be the king and redeemer of mankind. The conclusive answer to the objection is that the claims of Jesus were actually treated as in the highest degree presumptuous. They were scoffed at as monstrous by his contemporaries. He was put to death for bringing them forward. Shocking blasphemy was thought to be involved in such pretensions. It is true that individuals in that era set up to be the Messiah, especially in the tremendous contest that ensued with the Romans. But these false Messiahs were impostors, or men in whom imposture and wild fanaticism were equally mingled.

Mental disorder has actually been imputed to Jesus. At the beginning of his public labors at Capernaum, his relatives, hearing what excitement he was causing, and how the people thronged upon him, so that he and his disciples could not snatch a few minutes in which to take refreshment, for the moment feared that he was "beside himself."¹ No doubt will be raised about the truth of this incident: it is a circumstance which no disciple, earlier or later, would have been disposed to invent.

¹ Mark iii. 21; cf. ver. 32. In ver. 21 ἔλεγον may have an indefinite subject, and refer to a spreading report which the relatives—οἱ παρ' αὐτοῦ—had heard: so Ewald, Weiss, *Marcusevangelium*, ad loc. Or it may denote what was said by the relatives themselves: so Meyer.

The Pharisees and scribes charged that he was possessed of a demon. According to the Fourth Gospel, they said: "He hath a demon, and is mad."¹ The credibility of the fourth evangelist here is assumed by Rénan.² In Mark, the charge that he is possessed by the prince of evil spirits immediately follows the record of the attempt of his relatives "to lay hold of him."³ Not improbably the evangelist means to imply that mental aberration was involved in the accusation of the scribes, as it is expressly said to have been imputed to him by his family. This idea of mental alienation has not come alone from the Galilean family in their first amazement at the commotion excited by Jesus, and in their solicitude on account of his unremitting devotion to his work. Nor has it been confined to the adversaries who were stung by his rebukes and dreaded the loss of their hold on the people. A recent writer, after speaking of Jesus as swept onward, in the latter part of his career, by a tide of enthusiasm, says: "Sometimes one would have said that his reason was disturbed." "The grand vision of the kingdom of God made him dizzy."⁴ "His temperament, inordinately impassioned, carried him every moment beyond the limits of human nature."⁵ These suggestions of Rénan are cautiously expressed. He broaches, as will be seen hereafter, an hypothesis still more revolting, for the sake of clearing away difficulties which his atheistic or pantheistic philosophy does not enable him otherwise to surmount. Yet he does, tho not without some signs of timidity, more than insinuate that enthusiasm was carried to the pitch of derangement. Reason is said to have lost its balance.

The words and conduct of Jesus can be considered extravagant only on the supposition that his claims, his assertions respecting himself, were exaggerated. His words and actions were not out of harmony with these claims. It is in these pretensions, if anywhere, that the proof of mental alienation, must be sought. There is nothing in the teaching of Christ, there is nothing in his actions, to countenance the notion that he was dazed and deluded by morbidly excited feeling. Who can read the Sermon on the Mount and not be impressed with the per-

¹ *μαίνεται*, John x. 20.

² "Vie de Jésus," 13^{me} ed., p. 331.

³ Mark iii. 22.

⁴ "Lui donnait le vertige."

⁵ "Vie de Jésus," p. 331.

fect sobriety of his temperament? Everywhere, in discourse and dialogue, there is a vein of deep reflection. He meets opponents, and even cavillers, with arguments. When he is moved to indignation, there is the most complete self-possession. There is no vague outpouring of anger, as of a torrent bursting its barriers. Every item in the denunciation of the Pharisees is coupled with a distinct ground justifying it.¹ No single idea is seized upon and magnified at the expense of other truth of equal moment. No one-sided view of human nature is held up for acceptance. A broad, humane spirit pervades the precepts which he uttered. Asceticism, the snare of religious reformers, is foreign both to his teaching and his example. Shall the predictions relative to the spread of his kingdom and to its influence on the world of mankind be attributed to a dis-tempered fancy? But how has history vindicated them! What is the history of the Christian ages but the verification of that forecast which Jesus had of the effect of his work, brief tho it was? Men who give up important parts of the Christian creed discern, nevertheless, "the sweet reasonableness" which characterizes the teaching and, equally so, the actions of Jesus. The calm wisdom, the inexhaustible depth of which becomes more and more apparent as time flows on—is that the offspring of a disordered brain? That penetration into human nature which laid bare the secret springs of action, which knew men better than they knew themselves, piercing through every disguise—did that belong to an intellect diseased?

If we reject the hypothesis of mental alienation, we are driven to the alternative of accepting the consciousness of Jesus with respect to his office and position as veracious, or of attributing to him a deep moral depravation. He exalts himself above the level of mankind. He places himself on an eminence inaccessible to all other mortals. He conceives himself to stand in a relation both to God and to the human race to which no other human being can aspire. It would be the wildest dream for any other human being to imagine himself to be possessed of the prerogatives which Jesus quietly assumes to exercise. Is this mere assumption? What an amount of self-igno-

¹ Matt. xxiii.

rance does it not involve! What self-exaggeration is implied in it! If moral rectitude contains the least guaranty of self-knowledge, if purity of character tends to make a man know himself and guard himself from seizing on an elevation that does not belong to him, then what shall be said of him who is guilty of self-deification, or of what is almost equivalent? On the contrary, the holiness of Jesus, if he was holy, is a ground for giving credence to his convictions respecting himself.

If there is good reason to conclude that Jesus was a sinless man, there is an equal reason for believing in him. It has been said even by individuals among the defenders of the faith that, independently of miracles, his perfect sinlessness cannot be established. "But where," writes Dr. Mozley, "is the proof of perfect sinlessness? No outward life and conduct could prove this, because goodness depends on the inward motive, and the perfection of the inward motive is not proved by the outward act. Exactly the same act may be perfect or imperfect according to the spirit of the doer. The same language of indignation against the wicked which issues from our Lord's mouth might be uttered by an imperfect good man who mixed human frailty with the emotion."¹ The importance of miracles as the counterpart and complement of evidence of a different nature is not questioned. It is not denied that if by proof demonstration is meant, such proof of the sinlessness of Jesus is precluded. Reasoning on such a matter is, of course, probable. Nevertheless, it may be fully convincing. How do we judge respecting any one whom we well know, whether he possesses this trait of character or lacks that? How do we form a decisive opinion, in many cases, with regard to the motives of a particular act or in respect to his habitual temper? It is by processes of inference precisely similar to those by which we conclude that Jesus was pure and holy. There are indications of *perfect* purity and holiness which exclude rational doubt upon the point. There are phenomena, positive and negative, which presuppose sinless perfection, which refuse to be explained on any other hypothesis. If there are facts which it is impossible to account for if moral fault is admitted to exist, then the existence of moral fault is disproved.

¹ Mozley, "Lectures on Miracles," p. 11.

It may be thought that we are at least disabled from proving the sinlessness of Jesus until we have first established the ordinary belief as to the origin of the gospels. This idea is also a mistake. Our impression of the character of Christ results from a great number of incidents and conversations recorded of him. The data of the tradition are miscellaneous, multiform. If there had been matter which, if handed down, would have tended to an estimate of Jesus in the smallest degree less favorable than is deducible from the tradition as it stands, who was competent, even if anybody had been disposed, to eliminate it? What disciples, earlier or later, had the keenness of moral discernment which would have been requisite in order thus to sift the evangelic narrative? Something, to say the least—some words, some actions or omissions to act—would have been left to stain the fair picture. Moreover, the conception of the character of Jesus which grows up in the mind on a perusal of the gospel records has a unity, a harmony, a unique individuality, a verisimilitude. This proves that the narrative passages which call forth this image in the reader's mind are substantially faithful. The characteristics of Jesus which are collected from them must have belonged to an actual person.

In an exhaustive argument for the sinlessness of Jesus, one point would be the impression which his character made on others. What were the reproaches of his enemies? If there were faults, vulnerable places, his enemies would find them out. But the things which they laid to his charge are virtues. He associated with the poor and with evil-doers. But this was from love and from a desire to do them good. He was willing to do good on the Sabbath; that is, he was not a slave to ceremony. He honored the spirit, not the letter, of law. He did not bow to the authority of pretenders to superior sanctity. Leaving out of view his claim to be the Christ, we cannot think of a single accusation that does not redound to his credit. There is no reason to distrust the evangelic tradition which tells us that a thief at his side on the cross was struck with his innocence and said, "This man hath done nothing amiss." The centurion exclaimed, "Truly, this was a righteous man!" Since the narratives do not conceal the insults offered to Jesus by the Roman soldiers, and the scoffs of one of the malefactors,

there is no ground for ascribing to invention the incidents last mentioned. But what impression was made as to his character on the company of his intimate associates? They were not obtuse, unthinking followers. They often wondered that he did not take a different way of founding his kingdom, and spoke out their dissatisfaction. They were not incapable observers and critics of character. Peculiarities that must have excited their surprise they frankly related: as that he wept, was at times physically exhausted, prayed in an agony of supplication. These circumstances must have come from the original reporters. It is certain that had they marked anything in Jesus which was indicative of moral infirmity, the spell that bound them to him would have been broken. Their faith in him would have been dissolved. It is certain that in the closest association with him, in private and in public, they were more and more struck with his faultless excellence. They parted from him at last with the unanimous, undoubting conviction that not the faintest stain of moral guilt rested on his spirit. He was immaculate. This was a part of their preaching. Without that conviction on their part, Christianity never could have gained a foothold on the earth.

It is not my purpose to dwell on that marvellous union of virtues in the character of Jesus—virtues often apparently contrasted. It was not piety without philanthropy, or philanthropy without piety, but both in the closest union. It was love to God and love to man, each in perfection, and both forming one spirit. It was not compassion alone, unqualified by the sentiment of justice; nor was it rectitude, austere, unpitying. It was compassion *and* justice, the spirit of love and the spirit of truth, neither clashing with the other. There was a prevailing concern for the soul and the life to come, but no cynical indifference to human suffering and well-being now. There was courage that quailed before no adversary, but without the least ingredient of false daring and observant of the limits of prudence. There was a dignity which needed no exterior prop to uphold it, yet was mixed with a sweet humility. There was rebuke for the proudest, a relentless unmasking of sanctimonious oppressors of the poor, and the gentlest words for the child or the suffering invalid.

There is one fact which ought to remove every shadow of doubt as to the absolute sinlessness of Jesus. Let this fact be thoroughly pondered. He was utterly free from self-accusation, from the consciousness of fault; whereas had there been a failure in duty, his sense of guilt would have been intense and overwhelming. This must have been the case had there been only a single lapse—one instance, even in thought, of infidelity to God and conscience. But no such offence could have existed by itself; it would have tainted the character. Sin does not come and disappear like a passing cloud. Sin is self-propagating. Its first step is a fall and the beginning of a bondage. We reiterate that a consciousness of moral defect in such an one as we know that Jesus was, and as he is universally conceded to have been, must infallibly have betrayed itself in the clearest manifestations of conscious guilt, of penitence or remorse. The extreme delicacy of his moral sense is perfectly obvious. His moral criticism goes down to the secret recesses of the heart. He demands, be it observed, self-judgment: "First cast the beam out of thine own eye;" "Judge not." His condemnation of moral evil is utterly unsparing: the very roots of it in illicit desire are to be extirpated. He knows how sinful men are. He teaches them all to pray, "Forgive us our debts." Yet there is not a scintilla of evidence that he ever felt the need of offering that prayer for himself. From beginning to end there is not a lisp of self-blame. He prays often, he needs help from above, but there is no confession of personal unworthiness. Men generally are reminded of their sins when they are overtaken by calamity. The ejaculations of Jesus in the presence of his intimate associates, when he was sinking under the burden of mental sorrow, are transmitted—and there is no appearance whatever of a disposition on the part of disciples to cloak his mental experiences or misrepresent them—but not the slightest consciousness of error is betrayed in these spontaneous outpourings of the soul.

Let the reader contrast this unbroken peace of conscience with the self-chastisement of an upright spirit which has become alive to the obligations of divine law—the same law that Jesus inculcated. "Oh, wretched man that I am!" No language short of this corresponds to the abject distress of Paul. There are no bounds to his self-abasement: he is "the chief of sinners."

The burden of self-condemnation is too heavy for such conscientious minds to carry. Had the will of Jesus ever succumbed to the tempter, had moral evil ever found entrance into his heart, is it possible that his humiliation would have been less, or less manifest? That serene self-approbation would have fled from his soul. Had the Great Teacher, whose words are a kind of audible conscience ever attending us, and are more powerful than anything else to quicken the sense of obligation—had he so little moral sensibility as falsely to acquit himself of blame before God? It is psychologically impossible that he should have been blameworthy without knowing it, without feeling it with crushing distinctness and vividness, and without exhibiting penitence or remorse in the plainest manner. There was no such consciousness, there was no such expression of guilt. Therefore he was without sin.

We have said that there is nothing in the evangelic tradition to imply the faintest consciousness of moral evil in the mind of Jesus. A single passage has been by some falsely construed as containing such an implication. It may be worth while to notice it. To the ruler who inquired what he should do to secure eternal life, Jesus is said to have answered: "Why callest thou me good? there is none good but one, that is, God."¹ There is another reading of the passage in Matthew which is adopted by Tischendorf, "Why askest thou me concerning the good? There is one," etc.² This answer is not unsuitable to the question, "What good thing shall I do?" It points the inquirer to God. It is fitted to suggest that goodness is not in particular doings, but begins in a connecting of the soul with God. We cannot be certain, however, whether Jesus made exactly this response, or said what is given in the parallel passages in Mark and Luke (and in the accepted text of Matthew). If the latter hypothesis is correct, it is still plain that the design of Jesus was to direct the inquirer to God whose will, is the fountain of law. He disclaims the epithet "good," and applies it to God alone, meaning that God is the primal source of all goodness. Such an expression is in full accord with the usual

¹ Matt. xix. 17. Cf. Mark x. 18; Luke xviii. 19.

² τί με ἐρωτᾷς περὶ τοῦ ἀγαθοῦ;

language of Jesus descriptive of his dependence on God. The goodness of Jesus, tho without spot or flaw, was progressive in its development; and this distinction from the absolute goodness of God might justify the phraseology which he employed.¹ The humility which Jesus evinced in his reply to the ruler was not that of an offender against the divine law. Its ground was totally diverse.

There is a single occurrence narrated in the Fourth Gospel which may be appropriately noticed in this place.² Jesus said, "I go not up to this feast"—the "yet" in the authorized version forms no part of the text. "But when his brethren had gone up then he also went up, not openly, but secretly." Can anybody think that the author of the gospel, whoever he was, understands and means that his readers shall infer that the first statement to the brethren was an intentional untruth? It is quite possible that new considerations, not mentioned in the brief narration, induced Jesus to alter his purpose. This is, for instance, the opinion of Meyer.³ The expression, "I go not up," etc., may have been understood to signify simply that he would not accompany the festal caravan and thus make prematurely a public demonstration adapted to rouse and combine his adversaries. In fact he, did not show himself at Jerusalem until the first part of the feast was over. He partially travelled over Samaria. "My time," he had said to his brethren, "is not yet full come."

Complaints have been made of the severity of his denunciation of the Pharisees. Theodore Parker has given voice to this criticism. It is just these passages, however, and such as these which save Christianity from the stigma cast upon it by the patronizing critics who style it "a sweet Galilean version," and find in it nothing but a solace "for tender and weary souls."⁴ It is no fault in the teaching of Jesus that in it righteousness speaks out in trumpet-tones. There is no unseemly passion, but there is no sentimentalism. Hypocrisy and cruelty are painted in their proper colors. That retribution is stored up for the iniquity which steels itself against the motives to reform

¹ See Weiss, "*Matthäusevangelium*," ad loc.

² John vii. 8, 10, 14.

³ "*Evang. Johannis*," ad loc.

⁴ See Renan, "*English Conferences*," and *passim*.

is a part of the Gospel which no right-minded man would wish to blot out. It is a truth too clearly manifest in the constitution of things, too deeply graven on the consciences of men. The spotless excellence of Jesus needs no vindication against objections of this nature.

Were it possible to believe that, apart from the blinding, misleading influence of a perverse character, so monstrous an idea respecting himself as—supposing it to be false—gained a lodgment in the mind of Jesus, the effect must have been a steady, rapid moral deterioration. False pretensions, self-exalting claims, even if there is no deliberate insincerity in the assertion of them, distort the perceptions. They kindle pride and other unhealthy passions. The career of Mohammed, from the time when he set up to be a prophet, illustrates the downward course of one whose soul is possessed of a false persuasion of this sort. When the bounds that limit the rights of an individual in relation to his fellow-men are broken through, degeneracy of character follows. His head is turned. He seeks to hold a sceptre that is unlawfully grasped, to exercise a prerogative to which his powers are not adapted. Simplicity of feeling, self-restraint, respect for the equal rights of others, genuine fear of God, gradually die out.

If it be supposed that Jesus, as the result of morbid enthusiasm, falsely conceived of himself as the representative of God and the Lord and Redeemer of mankind, experience would have dispelled so vain a dream. It might, perhaps, have subsisted in the first flush of apparent, transient success. But defeat, failure, the desertion of supporters, will often awaken distrust even in a cause which is true and just. How would it have been with the professed Messiah when the leaders of church and state poured derision on his claims? How would it have been when his own neighbors among whom he had grown up chased him from the town? How, when the people who had flocked after him for a while, turned away in disbelief; when his own disciples betrayed or denied him; when ruin and disgrace were heaped upon his cause; when he was brought face to face with death? How would he have felt when the crown of thorns was put on his head? Would the dream of enthusiasm have survived all this? Would not this high-wrought self-confidence

have collapsed? Savonarola, when he stood in the pulpit of St. Mark's, with the eager multitude before him, and was excited by his own eloquence, seemed to himself to foresee, and ventured to foretell, specific events. But in the coolness and calm of his cell he had doubts about the reality of his own power of prediction. Hence, when tortured on the rack, he could not conscientiously affirm that his prophetic utterances were inspired of God. He might think so at certain moments; but there came the ordeal of sober reflection; there came the ordeal of suffering; and under this trial his own faith in himself was, to this extent, dissipated.

It must not be forgotten that from the beginning of the public life of Jesus to his last breath, the question of the reality of his pretensions was definitely before him. He could not escape from it for a moment. It confronted him at every turn. The question was, should men *believe in him*. The strength of his belief in himself was thus continually tested. It was a subject of debate with disbelievers. On one occasion—the historical reality of the occurrence no one doubts—he called together his disciples and inquired of them what idea was entertained respecting him by the people.¹ He heard their answer. Then he questioned them concerning their own conviction on this subject. One feels that his mood could not be more thoughtful, more deliberate. The declaration of faith by Peter he pronounces to be a rock. **It is an immovable foundation on which he will erect an indestructible community.** If Jesus persevered in the assertion of a groundless pretension, it was not for the reason that it was unchallenged. It was not cherished because there were few inclined to dispute it. He was not led to maintain it from want of reflection.

The foregoing considerations, it is believed, are sufficient to show that the abiding conviction in the mind of Jesus respecting his own mission and authority is inexplicable except on the supposition of its truth.

II.

The sinlessness of Jesus is in its probative force equivalent to a miracle: it establishes his supernatural mission; it proves his exceptional relation to God.

¹Matt. xvi. 13-21.

We are now to contemplate the sinlessness of Jesus from another point of view, as an event having a miraculous character, and as thus directly attesting his claims, or the validity of his consciousness of a supernatural connection with God.

Sin is the disharmony of the will with the law of universal love. This law is one in its essence, but branches out in two directions, as love supreme to God and equal or impartial love to men. We have no call here to investigate the origin of sin. It is the universality of sin in the world of mankind which is the postulate of the argument. Sin varies indefinitely in kind and degree. But sinfulness in its generic character is an attribute of the human family. Rarely is a human being to be found in whom no distinct fault of a moral nature is plainly discernible. There may be here and there a person whose days have been spent in the seclusion of domestic life, under Christian influences, without any such explicit manifestation of evil as arrests attention and calls for censure. Occasionally there is a man in whom, even tho he mingles in the active work of life, his associates find nothing to blame. But in these extremely infrequent instances of lives without any apparent blemish, the individuals themselves who are thus remarkable are the last to join in the favorable verdict. That sensitiveness of conscience which accompanies pure character recognizes and deplores the presence of sin. If there are not positive offences, there are defects; things are left undone which ought to be done. If there are no definite habits of feeling to be condemned, there is a conscious lack of a due energy of holy principle. In those who are deemed, and justly deemed, the most virtuous, and in whom there is no tendency to morbid self-depreciation, there are deep feelings of penitence. "If we say that we have no sin we deceive ourselves, and the truth is not in us."¹ This is quoted here not as being an authoritative testimony, but as the utterance of one whose standard of character was obviously the highest. With such an ideal of human perfection, the very thought that any man should consider himself sinless excites indignation. One who pronounces himself blameless before God proves that falsehood and not truth governs his judgment.

What shall be said, then, if there be One of whom it can

¹ 1 John i. 8.

truly be affirmed that every motive of his heart, not less than every overt action, was exactly confirmed to the loftiest ideal of excellence—one in whom there was never the faintest self-condemnation or the least ground for such an emotion? There is a miracle; not, indeed, on the same plane as miracles which interrupt the sequences of natural law. It is an event in another order of things than the material sphere. But it equally presupposes divine intervention. It is equally to all who discern the fact, a proclamation of the immediate presence of God. It is equally an attestation that he who is thus marked out in distinction from all other members of the race, bears a divine commission. There is an exception to an otherwise invariable experience. There is a break in the uniform course of things, to which no cause can be assigned in the natural order. Such a phenomenon authorizes the same inference as that which is drawn from the instantaneous cure, by a word, of a man born blind.

On this eminence He stands who called himself the Son of Man. It is not claimed that this peculiarity of itself proves the divinity of Jesus. This would be a larger conclusion than the premises justify. But the inference is unavoidable, first, that his relation to God is altogether peculiar, and, secondly, that his testimony respecting himself has the attestation of a miracle. That testimony must be on all hands allowed to have included the claim to be the authoritative guide and the saviour of mankind.

GEORGE P. FISHER.

CRITERIA OF THE VARIOUS KINDS OF TRUTH.

IN respect of religious opinion the educated young men of this age may be described as *unsettled*. They cannot be represented as having deep convictions, yet they are not unwilling to listen to the claims of religion and of all kinds of it. They cannot be designated sceptics; the most of them resent it as a calumny when they are charged with being atheists or materialists, tho numbers are cherishing views which are hurrying them on in this downward direction. They are not satisfied with the past, with its opinions or practices. They do not show any partiality for old creeds and confessions. Authority is not worshipped by them. They are bent on searching into the foundation of every belief, and therefore they would dig down deep, and are stirring up the rubbish and dust that stand in their way. They will not accept without first doubting and sifting even such truths, supposed to be long ago established, as the existence of God and the immortality of the soul and the essential distinction between good and evil. It is an age out of which good and evil, either or both, may come according as it is guided. We may cherish hope, for it is an inquiring age. We may entertain fears, for it is dancing on the edge of a precipice down which it may fall.

This age, like every other, is a transition one. Nothing here is abiding: the stream is ever flowing on; the present is hastening on to the future. The generation that now is will soon divide into two: one abiding in, or going back to, what will be very much the old faith, the other going on to a scepticism exceeding in boldness anything that has ever gone before. Somehow or other an old fisherman who lived eighteen hundred years ago, the same who anticipated the modern scientific doctrine

that the earth is to be burned up, had a fore-glimpse of this state of things: "There shall come in the last days scoffers walking after their own lusts, and saying, Where is the promise of his coming? for since the fathers fell asleep, all things continue as they were from the beginning of the creation." Meanwhile Pilate's question is being put—'What is truth?' Philosophers tell us that we have truth when our ideas are conformed to things. But can truth in this sense be found? This is the question eagerly put. Are there things to be known? or are our minds capable of knowing them? The extreme form in which this spirit embodies itself is Agnosticism—it used to be called Nescience, and the issue in which it lands us, Nihilism—and many are following it without knowing that they do so. It acknowledges with Hume that there are impressions and ideas, but without a mind impressed or entertaining the ideas; it admits with Kant phenomena in the sense of appearances; it believes in pleasures to be eagerly sought and avoided, but can find behind or beyond (or where it is to be found) in these no proof of a reality natural or supernatural. In such an age it may serve some good purpose to show that a certain amount of truth can be found, and that there are criteria which determine when we have found it.

Kant and the German metaphysicians have shown again and again that there is no one absolute criterion of truth to settle all truth for us; that will determine, for example, at one and the same time whether there is a fourth dimension of space, whether the planet Jupiter is inhabited, who is to be the next President of the United States, and what is to be the price of coal a year hence. But it can be shown that there are truths which can be ascertained, and that there are criteria which show when they are so, and these clear, sure, and capable of being definitely expressed. But the test which settles one truth does not necessarily settle all others or any others. It will be necessary to distinguish between different kinds of truth (and this is the merit of this article, if it has any); and we should be satisfied if we can find a criterion of each kind. It will be found that there are three kinds of truth, each of which has its own tests. The primary aim of the criteria, it should be noticed, is not to help us to discover truth, but to determine when we have discovered it.

I.—CRITERIA OF FIRST TRUTHS.

The mind must start with something. There are things which it knows at once. I know pleasure and pain. I do more: I know myself as feeling pleasure and pain. I know that I am surrounded with material objects extended and exercising properties. I know by barely contemplating them that these two straight lines cannot contain a space. These are called first truths. There must be first truths before there can be secondary ones; original before there can be derivative ones. Can we discover and enunciate these? I believe we can.

We are not at liberty, indeed, to appeal to a first principle when we please, or because it suits our purpose. When we are left without evidence, we are not therefore at liberty to allege that we need no evidence. When we are defeated in argument, we are not therefore to be permitted to escape by falling back on what is unproved and unprovable. It is true that we cannot prove everything, for this would imply an infinite chain of proofs every link of which would hang on another, while the whole would hang on nothing—that is, be incapable of proof. We cannot prove everything by mediate evidence, but we can show that we are justified in assuming certain things. We cannot prove that two straight lines cannot enclose a space, but we can show that we are justified in saying so. We can do so by the application of certain tests.

SELF-EVIDENCE is the primary test of that kind of truth which we are entitled to assume without mediate proof. We perceive the object to exist by simply looking at it. The truth shines in its own light, and in order to see we do not require light to shine upon it from any other quarter. We are conscious directly of self as understanding, as thinking, or as feeling, and we need no indirect evidence. Thus, too, we perceive by the eye a colored surface, and by the muscular touch a resisting object, and by the moral sense the evil of hypocrisy. The proof is seen by the contemplative mind in the things themselves. We are convinced that we need no other proof. A proffered probation from any other quarter would not add to the strength of our conviction. We do not seek any external proof, and if any

were pressed upon us we would feel it to be unnecessary—nay, to be an incumbrance, and almost an insult to our understanding.

But let us properly understand the nature of this self-evidence. It has constantly been misunderstood and misrepresented. It is not a mere feeling or an emotion belonging to the sensitive part of our nature. It is not a blind instinct or a belief in what we cannot see. It is not above reason or below reason; it is an exercise of primary reason prior, in the nature of things, to any derivative exercises. It is not, as Kant represents it, of the nature of a form in the mind imposed on objects contemplated and giving them a shape and color. It is a perception, it is an intuition of the object. We inspect these two straight lines, and perceive them to be such in their nature that they cannot enclose a space. If two straight lines go on for an inch without coming nearer each other, we are sure they will be no nearer if lengthened millions of miles as straight lines. On contemplating deceit we perceive the act to be wrong in its very nature. It is not a mere sentiment, such as we feel on the contemplation of pleasure and pain; it is a knowledge of an object. It is not the mind imposing or superinducing on the thing what is not in the thing; it is simply the mind perceiving what is in the thing. It is not merely subjective, it is also objective—to use phrases very liable to be misunderstood; or, to speak clearly, the perceiving mind (subject) perceives the thing (object). This is the most satisfactory of all evidence; and this because in it we are immediately cognizant of the thing. There is no evidence so ready to carry conviction. We cannot so much as conceive or imagine any evidence stronger.

NECESSITY is a secondary criterion. It has been represented by Leibnitz and many metaphysicians as the first and the essential test. This I regard as a mistake. Self-evidence comes first, and the other follows and is derived from it. We perceive an object before us and we know so much of its nature; and we cannot be made to believe that there is no such object, or that it is not what we believe it to be. I demur to the idea so often pressed upon us that we are to believe a certain proposition because we are necessitated to believe in it. This sounds too much like fatality to be agreeable to the free spirit of man. It is because we are conscious of self that we cannot be made to

believe that we do not exist. The account given of the principle by Herbert Spencer is a perverted and a vague one: all propositions are to be accepted as unquestionable whose negative is inconceivable. This does not give us a direct criterion, as self-evidence does, and the word inconceivable is very ambiguous. But necessity, while it is not the primary, is a potent secondary test. The self-evidence convinces us; the necessity prevents us from holding any different conviction.

UNIVERSALITY is the tertiary test. By this is meant that it is believed by all men. It is the argument from catholicity, or common consent—the *sensus communis*. All men are found to assent to the particular truth when it is fairly laid before them, as, for instance, that the shortest distance between two points is a straight line. It would not be wise nor safe to make this the primary test, as some of the ancients did. For, in the complexity of thought, in the constant actual mixing up of experiential with immediate evidence, it is difficult to determine what all men believe. It is even conceivable that all men might be deceived by reason of the deceitfulness of the faculties and the illusive nature of things. But this tertiary comes in to corroborate the primary test, or rather to show that the proposition can stand the primary test which proceeds on the observation of the very thing, in which it is satisfactory to find that all men are agreed.

Combine these and we have a perfect means of determining what are first truths. The first gives us a personal assurance of which we can never be deprived; the second secures that we cannot conquer it; the third that we can appeal to all men as having the same conviction. The first makes known realities; the second restrains us from breaking off from them; the third shows that we are surrounded with a community of beings to whom we can address ourselves in the assurance of meeting with a response.

But in order to be able to apply these criteria properly we must carry along with us certain explanations and limitations.

1. It should be noticed of intuitive truths that they are in the first instance *individual* or *singular*, and that we need to generalize the single perceptions in order to reach general maxims. In them we begin with contemplating a single object, say an external object and know it to be extended and solid, or an act

of benevolence and know it to be good, or an act of cruelty and proclaim it to be evil. But we can generalize the individual perceptions, and then we have general maxims or axioms, which we can apply to an infinite number of cases. We perceive that these two parallel lines will never meet; and we are sure that we should affirm the same of every other set of parallel lines, and hence we reach the general maxim that parallel lines will never meet. We perceive on the bare contemplation of this deed of deceit that it is base, but we would feel the same of every other deed of deceit, and hence the maxim deceit is evil. But it should be observed that in the formation of these general principles there is a discursive act in the shape of a generalizing process involved. It is here that there may creep in error, which is not in the intuitive but in the discursive process; for we may form a partial, a one-sided, or exaggerated generalization. Thus, on discovering a particular effect we at once judge or decide that it has a cause. But when we would make the principle universal we may fall into a mistake, and declare that "everything has a cause," which would require an infinite series of causes and make it necessary to hold that God himself has a cause. In such a case our generalization is wrong. But let the maxim take the form that "everything which begins to be has a cause," and we perceive that on a thing presenting itself to us as beginning we should proclaim it to have had a producing power. We thus see that there may be both truth and error in our metaphysical or moral maxims: truth in the primitive perception at the basis of the whole, but it may be hastiness leading to mutilation in the expression. Hence the wrangling in metaphysics. Thus, everybody acknowledges that two parallel lines can never meet, but there may be disputes as to the fit form in which to put the axiom. So, in regard to the generalized principles that every effect has a cause, that every quality implies a substance, that virtue is commendable; there may be a difficulty in expressing exactly what is meant by cause and effect, what by substance and quality, and what by virtue and moral good; and we may find that when we would make the expressions definite we fall into grievous mistakes, and this while we are certain that there is a self-evident, necessary, and universal truth if only we can seize it.

2. First truths are of various kinds, which we should endeavor to classify. Some of them are

Primitive Cognitions. In these the object is now before us, and is perceived by us. We perceive that this body has three dimensions in space, and cannot be made to believe otherwise. We decide that this thing, material or mental, cannot be and not be at the same time; that these two things, being each equal to the same thing, are equal to one another. In these cases the object is perceived at once and immediately. But there are others in which the object is not present, and the convictions may be regarded as

Primitive Beliefs. Here there is still an object. It is not present, but still it is contemplated. We have known the object somehow, and on conceiving it beliefs become attached to us. Thus, we know time in the concrete, and in regarding it we believe that time is continuous, that time past has run into time present, and that time present will run into time to come. A number of such faiths gather round our primitive cognitions and widen them indefinitely. We see two points in space; we are sure that there is space between, and that the shortest line between the two is a straight line. We can rise to still higher faiths. We believe of certain objects, say space and time, and God—when we come to know him as being infinite, that is—that they are always beyond our widest image or concept, and such that nothing can be added to or taken from them. The senses cannot give us these beliefs, nor can the understanding construct them out of the materials supplied by the senses. Some of them, such as the idea of the infinite, the perfect, lift us above our immediate experience into a higher sphere. We begin in all such cases with realities perceived or apprehended; and we are sure, if we proceed legitimately, that we end with realities. It should be remarked that in order to our having these cognitions and beliefs it is not necessary to express them or even put them in the shape of propositions. It is necessary first to have cognitions or beliefs regarding them before we form comparisons of them or affirm that they exist or possess certain properties. But out of these we can form

Primitive Judgments, in which we predicate—that is, make affirmations or denials—or discover certain properties or rela-

tions, as when we say space and time are without bounds and exist independent of the contemplative mind. In order that these judgments may be primitive they must be pronounced as to objects which have been perceived by intuition.

I ought here to add that the mind is capable of perceiving at once certain moral qualities, and we have

Moral Cognitions, Beliefs, and Judgments. On contemplating an act of self-sacrifice done for a friend or a good cause we know it at once to be good, or an act of selfishness we perceive it to be evil. When these acts are done by our neighbors we cannot notice them directly, but we are sure that they are good or evil; and these may be regarded as beliefs. When we put them in propositions we exercise judgment, as when we declare that sin deserves punishment.

3. The complexity of our mental states places difficulties in the way of our applying the criteria. There are opinions which have been acquired by a lengthened and constant observation, which association has wrought into our very nature, so that we feel as if they are native and necessary; and yet some of them may be mere hereditary or popular prejudices which have no warrant in reason. In particular, experiential truths or even fancies and prejudices may so mingle with our intuitions that it seems impossible to separate them and determine which is the self-evident principle in the complex notion. These circumstances, it should be admitted, do throw difficulties in the way of the application of our criteria. But these are not greater, after all, than the application of tests in any other department of knowledge, as, for example, chemical tests to determine the existence of poisons in very complex mixtures, and generally the verification of scientific discoveries of every description. But, in spite of these difficulties, the tests can be applied if only pains be taken to distinguish the things that differ, and to lay aside the things that are irrelevant. It is possible by a careful discrimination to separate the associated from the primitive judgment, and thus seize the conviction that is native and necessary and apply the tests to it.

4. In many instances it is essential to apply the tests to alleged intuitive truths before we put trust in them. In some cases, indeed, the spontaneous belief is so clear and assured that

we may follow it without instituting any reflex examination. But in other cases the supposed necessary truth may be mixed with extraneous matter which adulterates it. Every one acknowledges that for the purposes of accurate science it is of importance to have the axioms of mathematics and mechanics so enunciated that no empirical element has entered. In morals and jurisprudence evil consequences might arise from mixing up doubtful principles with true ones, from assuming, for instance, that the promotion of happiness is the sole and essential quality of virtue. Without a sifting we might often be tempted by indolence or prejudice to assume as true what ought to be proven, or what in fact cannot be proven. It is of special importance to apply these tests to all those higher faiths which perform so important a part in mystic philosophy and theology. In these there is commonly a real intuition, and this possibly of an elevating, inspiring order as a nucleus; but around this there may gather a halo consisting merely of mist irradiated by the light in the centre. All high minds have felt the influence of these faiths, and some have been transported by them. But earthly ingredients are apt to mingle with the ethereal and heavenward aspirations, and claim all the authority which these have. The gilding gold is made to give currency to the coin. Truth and error thus come to be hopelessly intermixed, and visions of fancy come to be regarded as revelations of heaven. The sceptic detects this, and in pulling up the tares he uproots the wheat; to vary our illustration, in tearing down the creepers he pulls asunder the wall on which they grow. These results are to be avoided by a reflex examination of the whole mental exercise. The idea of Plato, the ecstasy of the Alexandrians, the perfect of Descartes, Malebranche's vision of all things in God, the absolute of Kant, Schelling, and Hegel, the supposed inspirations of poets and the revelations to prophets who utter grand truths—all these point to and imply high realities. But they are liable to run into fancies and extravagances, into follies and deceptions, which delude and mislead those who believe in them, pervert their judgments, and render them ridiculous in the view of the world. There is gold in the mine, and all we have to do is by crucial tests to separate it from the dross that we may have the true metal.

Had our limits allowed I should have liked much to apply these tests to two works of ability recently published—Caird's "Philosophy of Religion" and Balfour's "Defence of Philosophic Doubt." The first of these is a Hegelian defence and exposition of religion. It is elevated both in style and thought, and will recommend Hegelianism (which has run and finished its course in Germany) to the British public more effectively than any other book written in the English tongue. The fault of the author is that of Hegel: he denies what he should have assumed, and assumes what he should have denied. Our tests would cut down a vast number of his principles and his reasonings. He represents intuitive or immediate conviction as purely empirical, whereas it is the primary exercise of reason. He asserts after the manner of the old Eleatics the unity of thought and reality, whereas thought affirming its own reality discloses a reality comprehensible by thought, but which is different from thought. He is perpetually assuming an absolute of which he does not condescend to give any intelligent account. He denies the logical validity of the argument from design for the existence of God, and thus undermines the old philosophic faith of Scotland, and gives us an argument from historical development which no shrewd Scotchman or American is likely to adopt. He insists after the manner of Hegel that truth is made up of contradictions. He reaches a refined rationalism different entirely from the evangelism hitherto preached in Scotland.

If Principal Caird errs by excess, Mr. Balfour errs by defect. It is not easy to determine the precise end he has in view. He is not to be regarded as a sceptic, least of all as a religious sceptic. His objections to all kinds of supposed truth are directed far more against boasted scientific certainty than religious faith. He has certainly been successful in showing that the objections taken by scientific men to religion apply with far greater force to their own dogmas. Some religious men are therefore rejoicing in what he has done. But it is somewhat perilous to make men doubt everything in order to shut them into some favorite tenets which they wish them to believe. They may thus be led into a bog from which they have no ability nor inclination to extricate themselves. He and his brother-in-law, Prof. Sidgwick, without being sceptics are the most successful men in our day

in starting doubts and difficulties. Mr. Balfour, whether sincerely or not I cannot say, represents our belief in truth, whether scientific or religious, as a vague and unreasoning instinct which the rising generation will regard as a poor defence against a reasoned scepticism. In this article I have carefully enunciated the canons of first truths, so as not to expose them to the cavils of Mr. Balfour, which are directed against representations of fundamental principles to which I am utterly opposed, and which cannot and should not be defended. By making self-evidence—that is, the perception of the thing—the primary test of fundamental truth we avoid his objections. He maintains that what we mean by ultimate is independent of proof. But we have shown that ultimate truths have their evidence in themselves in the realities perceived. He insists that when we say we believe we feel cold because consciousness tells us, and we believe in cause and effect because it is intuitive or *a priori*, the principle cannot be primitive, as it is represented as depending on something else. But in all such cases there is a mistake committed in the expression, often made, I admit, by metaphysicians, even by Hamilton, bringing in a reason or cause where there is none. We feel cold not *because* we are conscious of it; we believe in cause and effect not *because* it is intuitive or *a priori*. We perceive the cold at once, and believe that the effect has a cause by contemplating the effect; and there is no reason or cause, and the conviction is primitive. We call in the consciousness and intuition merely as criteria of what we have discerned directly.

II.—CRITERIA OF REASONED TRUTHS.

When we have got truth by self-evidence or by observation, we may add indefinitely to it by inference, in which we proceed from something given or allowed to something else derived from it by the mind contemplating it. If we have truth and reality in what we start with, and if we reason properly, we have also truth and reality in what we reach. Of course if what we assume be fictitious, what we arrive at may be the same. These inferences may be of three kinds, each of which has its tests.

IMMEDIATE INFERENCES, or what I am disposed to call *implied judgments*. Here we have a judgment given, and we

derive other judgments merely from contemplating the two notions compared. All general concepts, as logicians know, have both extension and comprehension. The extension has reference to the objects in the class; the comprehension to the qualities which combine them. Now, on the bare contemplation of the extension of the concepts we can draw certain inferences, as when it is granted that "all men have a conscience" we infer that "this man has a conscience" even tho he be a liar. From the same proposition we can draw the inference in comprehension that the possession of a conscience is an attribute of man. The canon is that whatever is involved in the extension and comprehension of a notion may be legitimately inferred.¹

MEDIATE REASONING.—Here we do not discover the relation of two notions, or as we call them when expressed in language, terms, by directly comparing them, but we can do so by means of a third term which has a connection with both. Reasoning thus consists in comparing two notions by means of a third. The canon of reasoning in its most general form is, "Notions which agree with one and the same notion agree with one another," with a corresponding dictum for negative reasoning. But the word "agree" is vague, and it is necessary to state

¹ From the proposition "men are responsible" the following may be drawn:

In Extension.

Every man is in the Class Responsible;
This man is responsible;
Some men are responsible;
Every tribe of mankind are responsible;
It is not true that some men are not responsible, etc., etc.

In Comprehension.

Man exists;
Responsibility is a real attribute;
Responsibility is an attribute of every man;
Responsibility is an attribute of this man;
Responsibility is an attribute of every tribe of men;
Responsibility is an attribute of some men;
Irresponsibility may be denied of all men;
No man is irresponsible;
Irresponsible beings are not men;
Men of wealth are responsible with their wealth;
To punish men is to punish responsible men.

See "The Laws of Discursive Thought: being a text-book of Formal Logic," by James McCosh, LL.D.

the nature of the agreement. This is done by two formulæ, which act as the criteria of reasoning.

The Dictum of Aristotle.—We have before us a crocodile, and wish to know how it brings forth its young. Our two terms are “crocodiles” and “bringing forth their young.” We find that it has been ascertained by science that the crocodile is a reptile, and that reptiles bring forth their young by eggs. We are now prepared to reason: “The crocodile, being a reptile, must bring forth its young by eggs.” Here we have three terms: two called the extremes, the original ones which we wish to compare, “crocodiles” and “bringing forth their young by eggs,” and a middle, “reptile,” by which we compare them. The process when expanded takes the form of two propositions, called the premises, and the conclusion drawn from them.

All reptiles bring forth their young by eggs;
The crocodile is a reptile;
Therefore it brings forth its young by eggs.

The conclusion is reached by the bare contemplation of the premises. The premises being true, the conclusion is true.

But this reasoning proceeds on a principle which it is desirable to have expressed and announced when it becomes the test of this kind of reasoning. It is, “Whatever is true of a class is true of all the members of the class.” What is true of reptiles generally is true of the reptiles called crocodiles, and of every individual crocodile. If we have not something that can be predicated—that is, affirmed or denied—of a class to constitute a premise, no conclusion can be drawn. Thus, if only some reptiles are oviparous, if only the greater number are so, we are not entitled to conclude that the crocodiles must be so. We have thus a very decisive and easily applicable test of reasoning.

In formal logic this governing principle is spread out in various forms, so as to enable us to apply the test to every case of ratiocination. First, the syllogism is found to be the universal form of mediate reasoning. Then logicians divide reasoning according to the position of the middle term, which is the nexus of the argument, and this gives four figures. I do not mean to unfold these; they are to be found in every treatise on elementary logic. All that I have to do is to show that thereby we have a criterion of ratiocination.

All this was established by Aristotle in his "Prior Analytics." A number of attempts have been made since his day to set aside his analysis or to improve upon it. None of these have met with anything more than a temporary success. But I am not convinced that the dictum of Aristotle is the regulating principle of all reasoning; it regulates only that reasoning which involves a general notion—that is, a class notion. It can be shown, I think, that there is a ratiocination which does not proceed on the principle of classes, but of identity or equivalence. Thus, we find that the stick A is equal to the stick B, and the stick B is equal to the stick C, and we conclude that the stick A is equal to the stick C. Here we have no classes or members of a class. The canon is, "Notions which are equivalent to one and the same third notion are equivalent to one another." In ratiocination of this description the subject of the propositions may be made the predicate, and the predicate the subject :

Shakespeare wrote "Hamlet;"

The writer of "Hamlet" is the greatest English poet:

Shakespeare was the greatest English poet.

All reasoning, in order to be valid, must fall under one or other of these rules, which are therefore the criteria of legitimate inference. When a professed argument cannot be brought under either of them, it is a proof that it is not reasoning. When, on endeavoring to bring it under them, we find that it is not in accordance with them, we may conclude that the inference is not valid.

Reasoning may take several forms, which are legitimate provided they are in conformity with the dictum of Aristotle or the principle of equivalents. The natural form in ordinary circumstances is the categorical, in which we lay down a general principle and bring a particular under it; as when we say, "Consumption is a fatal disease, and as this man has consumption he has a fatal disease;" or, not being sure of the fact, we say, "If this man has consumption he has a fatal disease." This reasoning is hypothetical, and is quite as valid as the categorical. Or the reasoning may take the disjunctive form: "This disease is either a severe cold or consumption. It is not a severe cold; therefore it is consumption."

The greater portion of the reasoning in mathematics is regu-

lated not by the dictum of Aristotle relating to classes, but the dictum of equivalence or equipollence.

III.—CRITERIA OF INDUCTIVE TRUTHS.

My purpose in the present article is not to show how truth is to be discovered, a subject which may be profitably discussed in the *Prolegomena* prefaced to the several sciences. I am simply to show that truth can be reached, and to give the marks which certify that it has been attained. I have given a brief exposition of the tests of intuitive truths and of reasoned truths. But there are branches of knowledge which have to deal from first to last and throughout with scattered facts. These become known in the first instance by the senses, external and internal. In the case of the bodily senses our observations are aided by such instruments as the telescope, the microscope, and the blow-pipe. The affections of the mind are revealed by consciousness aided by attention and analysis. The criterion in such cases is

The Testimony of the Bodily Senses and Self-Consciousness.—

This is primarily of the nature of an intuition, the criteria of which have already been given. But it is to be remembered, what we have previously noticed when treating of first truths, that reasonings and even fancies are apt to mingle with our intuitions proper, and may perplex and mislead. In such cases we are carefully to separate all additions, illegitimate and legitimate, from the immediate perceptions of sense and consciousness. So far as they are fancies, they are simply to be cast aside. In some cases this is difficult, as there may be illusions to which we are naturally inclined by the laws of association. It is not easy in the multitude of our thoughts within us to specify our precise experience at any given time, and in the attempted description we may subtract or we may exaggerate. So far as the additions, or rather concomitants, are inferences, they may be tried by the tests of reasoning as given above. In viewing along the surface of the ocean a rock which actual measurement tells us is two miles off, we regard it as only a mile away: but in this we are drawing a wrong inference. By the eye we intuitively know only a colored surface; but we can come by experience to know distance, and we lay it down as a rule that when there are few things between us and an object that the object

must be near—a rule correct enough for ordinary use, but which may fail us in extraordinary circumstances. It is always possible with the proper pains to separate the perceptions of the senses from all adventitious circumstances, and to discover the truth pure and simple in the midst of the accretions.

But in all this we have only individual facts, which inform us of nothing beyond themselves. We have not as yet any means of anticipating the future from the past, or gathering wisdom from experience. In particular we have not as yet any science, which consists, not of individual and scattered and isolated facts, but of systematized knowledge. In order to have science we must co-ordinate the facts. We do so in order to discover *laws*—that is, the order that is in nature. In doing so we can discover truths of which we can now give the criteria. These are called the

Canons of Induction.

It should be observed that these do not guarantee to us absolute certainty, what is called apodictive truth or demonstration. None of these are certified, as first truths are, by the law of necessity; we can easily conceive any one of the ordinary physical laws not to be true universally, and we might believe so provided we have evidence. The evidence, after all, is merely a probability of a lower or higher degree, but may rise to a certainty only a little short of being absolute, and quite sufficient to justify us to put trust in it and act upon it in ordinary, indeed in all, circumstances. Such, for instance, is the proof which we have in favor of the law of gravitation. It is not demonstrative like a mathematical truth, but it satisfies the mind and is verified by constant observation. The doubts raised by Mr. Balfour in regard to scientific truths almost all derive their force from the circumstance that observation cannot reach all the facts and give us absolute certainty.

But the question arises, How from scattered facts do we reach a law which we may regard as universal? Most people, on the question being first put to them, would answer, By observing *all* the facts. But a moment's reflection suffices to show that in most cases, I believe in all, we cannot find out all the facts. Take the law, all mammals are warm-blooded, or that all matter attracts other matter inversely according to the square of the

distance ; nobody has gone the round of the universe and noticed every mammal and every particle of matter, so as to be able from his own observation to say that no mammal is cold-blooded, and no particle of matter is without the power of attraction. But we can, notwithstanding, from a limited number of observations rise to a law which seems to be universal. The canons of induction determine for us when we have reached a law of nature.

There seem to be three grand ends which men of science have in view in their investigations. One is to discover the composition of the objects around us ; the second is to discover natural classes ; the third is to discover causes. There are canons which guide and guard us in each of these investigations.

I. *Canons of Decomposition.*—Almost all the objects we meet with in the world, whether material or mental, are composite. It is the aim of many departments of science, in particular of chemistry and psychology, to analyze them. This can so far be effectively done. There are certain rules to guide us, and these may be made more and more specific as the analytic sciences advance.

A. We must separate the object we wish to decompose from all other objects. If we wish to analyze water, we must have pure water separate from all other ingredients. If we wish to analyze intuition or reasoning we must separate it from all associated observations and fancies.

B. When we have found the composition of any piece or portion of a substance, we have determined the composition of every other part, and indeed of the whole. When we have ascertained that a pint of water is formed of hydrogen and oxygen, we have settled that water everywhere is composed of the same elements. This arises from the circumstance that every substance in nature has its properties which it retains. Having detected these properties in one case, we have found what they are in all.

C. The elements reached are to be regarded as being so only provisionally. We are not sure that in any cases we have found the ultimate elements of bodies. At present it is supposed that there are sixty-four elements, but we are not sure of any one of these that it will never be resolved into simpler substances. Meanwhile the chemical analysis is correct so far as it goes. It will always hold true that water is composed of oxygen and hydrogen, tho it is possible that oxygen or hydrogen, one or both, may be resolved into something simpler.

II. *Canons of Natural Classes.*—There are certain sciences which are called by Whewell classificatory. They are such as botany, zoology, and mineralogy. In these our aim is to arrange the objects in nature in classes lower and higher, such as species, genera, orders, and kingdoms. They are so arranged by their points of resemblance. There are canons which may assist us in determining when we have reached these classes.

A. We must have observed the resemblance in many and varied cases, say in different countries and at different times.

B. We must be in a position to say that if there had been exceptions we must have met them. These two rules guard against forming a law from a limited class of facts.

C. There are classes in nature called Kinds, in which the possession of one quality is a mark of a number of others. All classes entitled to be called natural are more or less of this description. Thus, mammals are so designated because they suckle their young, but this characteristic is a mark of a number of others: that the animals are warm-blooded and have four compartments in their hearts. Reptiles are recognized as producing their young by eggs, but they are also marked as having three compartments in the heart and being cold-blooded.

These canons guarantee truth. When we are able to place objects in a class we know that they possess the properties of the class.

III. *Canons of Causes.*—These determine for us when we have discovered the cause of any given phenomena. This subject was first systematically taken up by Bacon. He insisted on the careful observation of instances. But he knew that all instances are not of like value, and he found it needful to specify certain instances as of greater significance than others. These he called *prærogativæ instantiarum*, and enumerates twenty-seven species of them, most of which are not applicable in the advanced stage of science we have now reached. It may be enough to give only one example, that of *instantia crucis*, the phrase being derived from the custom of placing a cross where two ways meet to guide the traveller. There are cases in which it is alleged that there may be one or other of two causes of the phenomenon. In these we should seek for a phenomenon which can be explained by the one and not by the other. Sir John Herschel has taken up the subject in his "Discourse on Natural Philosophy." But

the most lucid and upon the whole the clearest and most satisfactory exposition of these methods is by Mr. John S. Mill in his "Logic." It should be noticed that his methods relate to causes, and we have not had from him an exposition of the canons of decomposition and classes as given above. He mentions four or five methods.

A. The Method of Agreement.—In the spring season we see innumerable buds, leaves, and blossoms appearing upon the plants, and we find the common cause to be the heat of the sun shining more directly upon the earth. The canon is, "If two or more effects have only one antecedent in common, that antecedent is the cause, or at least part of the cause." That canon is too loose to admit of a universal application, as we may not be sure that the point of agreement we have fixed on is the only one.

B. The Method of Difference.—In the very middle of the day I find the scene around me on the earth suddenly darkened. There must be a cause. I find that the moon has come between us and the sun, and this seems the only difference between the two states—the one in which everything was bright, and the other in which it is in gloom. The canon is, "If in comparing one case in which the effect takes place and another in which it does not take place, we find the latter to have every antecedent in common with the former except one; that one circumstance is the cause of the former, or at least part of the cause." This method is the one employed in cases in which experiment with its separating power is available. It is the most decisive of all tests when the circumstances admit of its application. There are cases in which this method is not applicable, when a sort of intermediate one may come to our aid:

C. The Indirect Method of Difference, or the Joint Method of Agreement and Difference.—The canon is, "If two or more cases in which the phenomenon occurs have only one antecedent in common, while two or more instances in which it does not occur have nothing in common but the absence of that antecedent, the circumstance in which alone the two sets of cases differ is the cause, or part of the cause, of the phenomenon." The illustration given by Mr. Mill is: "All animals which have a well-developed respiratory system, and therefore aerate the blood, perfectly agree in being warm-blooded, while those whose res-

piratory system is imperfect do not maintain a temperature much exceeding that of the surrounding medium; we may argue from the two-fold experience that the change which takes place in the blood by respiration is the cause of animal heat."

D. The Method of Concomitant Variations.—We want to know the cause of the rise of water in a pump or of mercury in a barometer. The ancients accounted for this by nature's horror of a vacuum, which is inconsistent with the fact that water will not rise above a certain number of feet in the pump. Torricelli and Pascal gave a better explanation when they referred the rising of the water or mercury to the weight of the incumbent atmosphere, which Pascal proved by ascending a mountain with a barometer and finding that as he rose higher and higher the mercury fell lower and lower in the tube. Here we have the effect varying with its alleged cause, which is an evidence that the alleged cause is the true one. The canon is, "Whenever an effect varies according as its alleged cause varies, that alleged cause may be regarded as the true cause, or at least as proceeding from the true cause."

E. The Method of Residues.—A farmer knows how much grain a particular field has yielded in the past. He mixes manure with the earth on the field, and finds he has a larger crop, and he ascribes the increase to the manure. He knows what the previously existing antecedents will produce, and after subtracting this he ascribes the residue to the new antecedent. The canon is, "Subtract from an effect whatever is known to proceed from certain antecedents, and the residue must be the effect of the remaining antecedents."

I do not need here to give anything more than the above general account of these canons, which are fully unfolded by Mr. Mill. I mention them simply to show that when they are applied they settle for us what is truth.

Prof. Jevons, I am aware, has made a determined attack on them (*Contemporary Review*, vol. xxxi.). For fourteen years he had used Mr. Mill's works as partially his text-books in teaching, but now he has discovered that his philosophy is sophistical and false and doing immense injury; and in the reaction he has expressed himself strongly and passionately. I do not wonder that Mr. Jevons should speak thus of the metaphysics which underlies Mill's theory of induction. But his canons of causes

(he does not mention decomposition and classes) seem to me to be the best that have yet been expounded. Certainly Mr. Jevons has not given nearly so satisfactory an exposition of the methods of science in his elaborate work "The Principles of Science." I am not disposed to argue that Mr. Mill's version is perfect, or that it will never be modified as science enters new fields. I am inclined to think that there is special need of a logic adapted to those sciences in which there is a union of induction and deduction, particularly where there is the application of mathematics to laws discovered by observation. This is a field in which Prof. Jevons is fitted to labor with great success. The sciences which begin with induction and which, I believe, shall have to end with induction in the verification of the previous inductions, are becoming more and more deductive, and we have need of a theory and canons of what I call the Joint Inductive and Deductive Method, as practised in the social sciences and in the more recondite branches of physical sciences, in which mathematics have to be used as an instrument.

The canons of induction admit of an application to all the sciences which deal with scattered facts. Subsidiary rules, however, require to be added for each department of knowledge. There are, for instance, *Canons of Testimony*. In order to believe the report of a witness I must have reason to believe that he has means of knowing what he relates to be true. I must also have reason to believe that he is honest. Or, alternately, if I do not know him to be honest I must have reason to believe that he has no motive to deceive. Some other rules will also be followed: such as it is a good thing when the narrative is easy and natural; it is a good sign when it is consistent. Again, it is a bad sign when it is artificial, or when its consistency is a labored one. We use such guides as these in the common affairs of life, and we employ them in historical criticism.

These canons, as they determine what truth we can reach, also show how stringent are the limits laid on our researches and discoveries. Much as we know, there is evidently vastly more that we do not know, and probably infinitely more that we never can know in this world. "We know in part." Yes, we know, but we know only in part. We who dwell in a world "where day and night alternate," we who go everywhere accompanied by our own shadow—a shadow produced by our dark

body, but produced because there is light—cannot expect to be absolutely delivered from the darkness. Man's faculties, exquisitely adapted to the sphere in which he moves, were never intended to enable him to comprehend all truth. The mind is in this respect like the eye. The eye is so constituted as to perceive things within a certain range, but as objects are removed farther and farther from us they become more indistinct, and at length are lost sight of altogether. It is the same with the intellect of man. It can penetrate a certain distance and understand certain subjects, but as they stretch away farther they look more and more confused, and at length they disappear from the view. And if the human spirit attempts to mount higher than its limited range, it will find all its flights fruitless. The dove, to use a well-known illustration of Kant's, may mount to a certain height in the heavens; but as she rises the air becomes lighter, and at length she finds that she can no longer float upon its bosom, and should she attempt to soar higher her pinions flutter in emptiness, and she falters and falls. So it is with the spirit of man: it can wing its way a very considerable distance into the expanse above it, but there is a boundary which if it attempts to pass, it will find all its conceptions void and its ratiocinations unconnected.

Placed as we are in the centre of boundless space and in the middle of eternal ages, we can see only a few objects immediately around us, and all others fade in outline as they are removed from us by distance, till at length they lie altogether beyond our vision. And this remark holds true not only of the more ignorant, of those whose eye can penetrate the least distance; it is true also of the learned; it is perhaps true of all created beings that there is a bounding sphere of darkness surrounding the space rendered clear by the torch of science. Nay, it almost looks as if the wider the boundaries of science are pushed, and the greater the space illuminated by it, the greater in proportion the bounding sphere of darkness into which no rays penetrate, just as (to use a very old comparison) when we strike up a light in the midst of darkness, in very proportion as the light becomes stronger so does also that surface dark and black which is rendered visible.

JAMES MCCOSH.







